


AMERICAN GRAINERS'  
—  
MASURY.  
—  
HAND BOOK.



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THE  
AMERICAN GRAINERS'  
HAND-BOOK:

A POPULAR AND PRACTICAL TREATISE

ON THE ART OF

Imitating Colored and Fancy Woods;

WITH

EXAMPLES AND ILLUSTRATIONS,

BOTH IN OIL AND DISTEMPER.

BY THE AUTHOR OF

"How Shall we Paint," "Plain Talk with Practical  
Painters," "Coach Painters' Companion," &c.



PUBLISHED BY

JOHN W. MASURY & SON,  
NEW YORK.

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# THE AMERICAN GRAINERS' HAND-BOOK.

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## INTRODUCTORY.

"THE ART OF IMITATING COLORED AND FANCY WOODS, TAUGHT IN TWELVE EASY LESSONS," would be a "taking" caption to this introduction, and some credulous souls would certainly believe it true. We are sorry to dispel such simple and child-like faith; but a regard for truth and common sense compels us to declare, that to reach the goal of success—in this, as in all other branches of the art of painting—one must travel the long road of patient study, close observation, and practice, practice, practice. To imitate with colors, the veins and grains and figures in a piece of fancy wood, requires the same faculties, the same development of perceptive power, the same care and skill and talent, as are required to portray the lineaments of the human face. Not in the same degree, perhaps, but in the same direction.

As no two faces are alike, so no two pieces of wood are exactly similar. For this reason, the grainer must always be a student, always a learner. Oak wood, for example, presents all neutral browns, from Vandyke brown to almost white. One may see in it a knot, which is the color of charcoal, and albino specimens, which are quite devoid of color; between

these two extremes may be found every possible shade of red and yellow brown. Light oak requires a ground-work of palest straw color, while dark oak is best imitated on a ground of red, almost bright enough for mahogany. White oak is almost devoid of color, while the Western oak is quite a foxy red: and no jury of expert grainers would agree as to what is the average color of the wood, because each one would have a prejudice or predilection for some particular tone which he has unconsciously fixed in his mind, and which he has habitually accustomed himself to impart to his work. As a rule, light oak graining presents too much of the yellow, and dark oak is represented with too little of the red tone. In other words, light oak is made too bright, and dark oak not bright enough.

The novice must not expect to make even a tolerable imitation of any fancy or common wood, by the simple application of graining color to a proper ground. The operation is three-fold, and in some cases even more than that. Finished natural woods do not reflect their colors superficially altogether. They have depth, as well as tone and figure; and in colored imitations of the same, these facts and conditions must be respected, and the operation must proceed in accordance therewith. The requisites are: a solid, smooth ground-work, a coat of graining color on that whereby may be shown the grain and figures of the wood, and on that, a glazing of transparent color, to show the lights and shades, and to give the required depth and transparency. It must not be forgotten that the intent in graining, is not to represent the wood in its natural colors, but in the tones and shades it puts on when varnished or polished. The cold blackish grey of unfinished black walnut for instance, is altogether different from the warm reddish brown which this wood reflects when varnished and polished. There is, too, a rich undertone of yellowish red, which glows out from beneath the surface, the

presence of which would not be suspected in the natural growth, as it comes from the planer. Woods, too, change color when exposed to the light and to other atmospheric influences, and put on a richer, mellower, softer tone with age and use. These conditions must be known and respected, too, if the learner would become a successful imitator of natural woods. In this, as in other branches of imitative art, nature must not be followed too closely; because, nature in her endless variety, presents many specimens which the painter would rather avoid than imitate.

The animal painter would not select from the flock the shabby specimens to show on his canvas. So, the imitator of fancy woods should select, for imitation, the best which nature offers; those which are most pleasing to the eye, and most interesting as objects of study and observation. Natural deformities, except as curiosities, are not worth perpetuating.

## CHAPTER II.

PAINTED IMITATIONS OF COLORED WOODS, TECHNICALLY CALLED  
GRAINING.

THE art of imitating the grain, knots and colors of fancy woods, is—like all painting not merely mechanical—acquired by study, close observation, and long continued and constant practice. Success in this line, is dependent on the possession, or development, rather, of those faculties without which a person should hardly adopt this profession as a specialty. An eye prompt in detecting similarity in shades and hues of color, imitative power and delicate manipulation, is indispensable in the make up of a good Grainer.

Formerly the House Painter was supposed to include among his accomplishments the Art of Graining as well as Sign Painting, Gilding, and all other branches of the trade; but of late years it has become the custom for some to give undivided attention to these several branches, for which they individually have, or seem to have, a special faculty, taste or predilection. Therefore certain workmen designate themselves as "Grainers to the Trade," "Sign Writers to the Trade," &c., &c. This custom can obtain, of course, only in the larger places, there not being in small towns and villages sufficient work in any one branch to permit workmen to devote themselves entirely to a special department.

To teach the art of imitating the grain of the various woods used in domestic architecture, by a set of written rules



and directions, would be as much an impossibility as to make a finished musician by teaching the theory of sound. Even a tolerable degree of perfection in the art can be obtained only by much practice and close observation; but, there is a great deal that can be told, and much that can be acquired more easily than by practice, the same being the knowledge experimentally gained by those who, with skill and long practice, have become perfected in this particular branch of the art of painting.

The disposition for grained work, which at one time declined materially, has of late years revived; and the fashion for this kind of painting is now more prevalent and general than ever before, the difference being simply that certain kinds of woods, as mahogany, rosewood and maple, which were once much desired, have been supplanted by an affection for light and dark oak and black walnut. The number and variety of brushes and other tools used in graining, can be herein shown, with sufficient accuracy of description, to enable the novice, or entirely unlearned, to order what he will necessarily require in case he shall be disposed to practice the imitative art.

Formerly, the art of graining in oil colors was practiced comparatively by few, and the knowledge of the pigments and other materials used, was a real or pretended secret. The writer has seen a professed grainer involve himself in the utmost secrecy, and work in a mysterious way when simply mixing common brown wax with heated oil and turpentine to make what is called "magilp." These little "tricks of the trade," the quackery of the professors, are much less common now than in younger times. The printing age, and the book-making mania, have brought to light most of those occult compoundings, and placed what was once hidden knowledge within the reach of all. There is truly no trickery in art. Its best results are gained only by patient labor; and

the artist who claims to accomplish these by some secret process known only to himself, may be set down—a quack. In these, our times, not only are there no mysterious compoundings, but the would-be grainer does not of necessity require a knowledge of the simple names of the materials which he would use, because of the fact that READY-MADE GRAINING COLORS—which require only to be thinned to fit them for use—are placed within his easy reach. Therefore, the greatest of the obstacles in the way of the practice of graining—by those who have not had the advantages of practical instruction in the art—is removed; and the would-be grainer has only to learn the theory of “how to do it,” and all the rest comes by practice and observation.

When and wherever in the following pages rules and proportions are given for producing certain tones and tints for ground work, or for other purposes, the reader will bear in mind the fact, that the looked for results cannot be reached by the use of materials which differ from those given, either in kind or quality. Every painter should readily see the necessity of adopting some absolute standard, otherwise we shall all be working in the dark. When we say Raw Italian Sienna tinted with White Lead, will give the best ground work for Light Oak Graining, we beg the reader not to expect to produce that result with lead that is White Lead only in name, and with Sienna which is a clay-colored mixture, as unlike the genuine Italian Sienna as the sale of it is unlike honest dealing. No painter should ever purchase a package of ground color which does not bear upon it the name and guarantee of some well-known responsible manufacturer. The consumer should know, as a rule, that the ground paints sold throughout the country are not genuine. The packages do not contain—even in a highly adulterated state—the article which is indicated by the label or brand on the exterior thereof.

White Lead, so well known by its familiar name, is the most important and useful article in the stock of the painter. Its unequaled density, opacity and easy-working qualities, have made it the favorite pigment with the Trade, and all attempts to supersede it have been, so far, entirely without success. The demand for it is always increasing, and new establishments are from time to time erected in different parts of the country to supply the growing want. No article in common use probably has been adulterated to such a shameful extent, as has this indispensable pigment. The fact that its purity can be ascertained by chemical or mechanical tests which are known only to the initiated, has rendered this adulteration easy and its detection extremely difficult; and to-day the only guarantee which the purchaser has of the genuineness of the paint, is the name of the maker which the containing-package bears. This, even, is not an absolute security, because the marks and brands of well-known manufacturers have been fraudulently counterfeited and imitated. White Lead is what is known in trade as a *leading* article. What sugar is to the grocer, White Lead is to the seller of paints. It is almost everywhere sold at a merely nominal profit; and the tradesman readily accepts anything bearing the name of pure White Lead which he can sell at the price of the genuine article. The result is, a satisfactory enhancement of the seller's profit, but extreme disappointment on the part of the consumer. Thousands of tons of so-called White Lead are annually sold in the United States which do not contain a single grain of that material. A detailed statement of the ways and means whereby this fraud upon the consumer is effected, would seem hardly necessary here, and we rest upon a simple statement of the fact, as being all that is necessary or important.

The samples shown on succeeding pages are all produced by the use of pure White Lead. In giving directions for re-

producing these tints it becomes, of course, absolutely necessary that some base of proceedings be first established; otherwise our results would be as uncertain as the wind. It would be worse than vanity for the writer to give directions for the producing a given tone of buff, for instance, if the materials necessary to the mixture were not the same in *quality* as well as *quantity*. If the white, which must form the base and bulk of the mixture, be not White Lead, but only a fictitious imitation of it, and the quantity of color necessary to reproduce the given tint be used, the result, of course, would be entirely unexpected. At the risk of being charged with unnecessary repetition, the writer would again call the attention of the consumer to the fact that all painting, to be done economically, must be performed with the best materials. If White Lead be required to paint a house, get *Pure Lead*, at whatever cost. If Yellow Ochre is demanded, get it pure, if you can. Every painter and consumer will do well to lay to heart the following axioms:

1st.—The purer the paint and the better it is of its kind, the less it costs to do painting of whatever grade or degree.

2d.—A job of painting, of whatever character, can be performed at a less first cost of money and time with the best, rather than with the cheapest paints.

I propose to give the address of those manufacturers of White Lead in the United States whose name is ample guarantee of the genuineness of their products.

A keg or pail of White Lead, honestly bearing the name or brand of any of the following firms or corporations, may be used in accordance with the rules laid down without fear of unexpected results; but without claiming that the following list includes all the names of Corrodors of Lead in the country, the writer has no hesitation in assuring the consumer, that he may use the Pure White Lead manufactured

by any of named firms with the fullest confidence in its genuineness and purity.

ATLANTIC WHITE LEAD COMPANY. ROBERT COLGATE & Co.,  
No. 287 Pearl Street, New York.

BOSTON LEAD COMPANY, Boston, Mass. J. H. CHADWICK & Co.,  
Agents.

JOHN JEWETT & SONS, 182 Front Street, New York.

FOREST RIVER LEAD Co., Salem, Mass.

CORNELL LEAD Co., Buffalo, N. Y. S. G. CORNELL & SON.

MARYLAND WHITE LEAD Co., of the City of Baltimore.

ST. LOUIS LEAD & OIL Co., St. Louis, Mo.

BEYMER, BAUMAN & Co., Pittsburgh, Pa.

WETHERILL & BROTHER, Philadelphia, Pa.

ECKSTEIN, HILLS & Co., Cincinnati, Ohio.

BATTELLE & RENWICK, 163 Front Street, New York.

EAGLE WHITE LEAD Co., Cincinnati, Ohio.

UNION WHITE LEAD MANUFACTURING Co., New York City.

SALEM LEAD COMPANY, Salem, Mass.

BROOKLYN WHITE LEAD Co., 89 Maiden Lane, New York.

SOUTHERN WHITE LEAD & COLOR WORKS, St. Louis, Mo.

COLLIER WHITE LEAD & OIL COMPANY, St. Louis, Mo.



Every man of common sense can understand that buying sugar which is half sand, because the nominal price is only two-thirds that of pure sugar, is not an economical proceeding. Yet painters and other consumers buy paints every day which are more than half sand or some other worthless material, simply because the nominal price is less than that of pure color. It ought not to require a very brilliant intellect to comprehend the fact, that in distributing a pound of pure color through ten cans of so-called ground paints, the consumer has to pay for ten packages instead of one, and ten freights and ten profits when he should pay only one. This digression is made in the hope of impressing the painter, once for all, with the absolute necessity of supplying himself with the purest materials. With such the best results are possible. Without them he need hardly hope for success. As a rule, it will be well to avoid many-hued labels. These are often used with intent to deceive. Truth can commonly be told on plain white paper!

## CHAPTER III.

## GROUND, AND GRAINING COLORS.

LOOKING at a wainscot or wall of oak and black walnut in alternate strips, one sees a variety of tints, from pale yellow, to light umber tone in the oak, and from light red-yellow-brown, to deepest black-brown in the walnut. It becomes necessary, therefore, in order to avoid the extraordinary labor of making a ground for each separate width or strip, to put on such a color for the ground of either wood, as will enable the workman to show the *lightest* colors which the woods respectively present, trusting to a greater depth and body of color to produce the darker shades.

The ground color for light-oak, maple, satin-wood, chestnut and ash, may be the same. We do not say that all these woods may be imitated equally well on the same colored ground; yet the specimens of those several woods shown in this book were all grained on ground of the same tint: that is, Raw Italian Sienna and pure White Lead. Black walnut ground of course differs materially from the others mentioned, both in tone and depth of color; but it would not be a difficult task for an expert to make a fair job of black walnut on the maple ground. Attention is called to this fact to show that the color of the ground work is after all of less consequence than it would seem, supposing it to be light enough, as its brightness can always be subdued by the use of a greater quantity of the dark graining color, and the glazing coat. It

is, however, a matter of prime importance, that the surface of the work shall be smooth, solid and uniform in color, in order that the graining color shall comb cleanly and wipe out clearly and brightly. The graining colors also should be compounded of the best Italian Siennas, or Turkey Umber, or German Vandyke Brown, as the case may require. If common colors be used, such as are generally sold in the shops in the country, the work will present a muddy, cloudy appearance, alike inartistic and unsatisfactory. In the matter of economy, the best colors are altogether preferable, for the reason that a dollar's worth of the pure colors will be sufficient to cover a much larger surface than three dollars of impure, so-called cheap colors. In the first case the best results are possible; in the second, they are utterly unattainable.

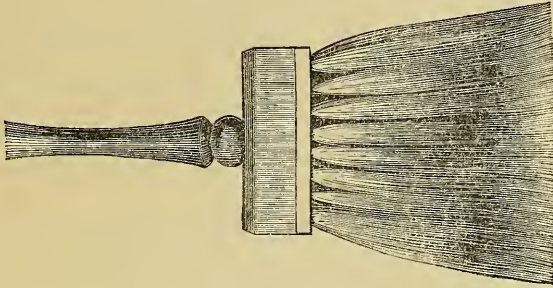


## CHAPTER IV.

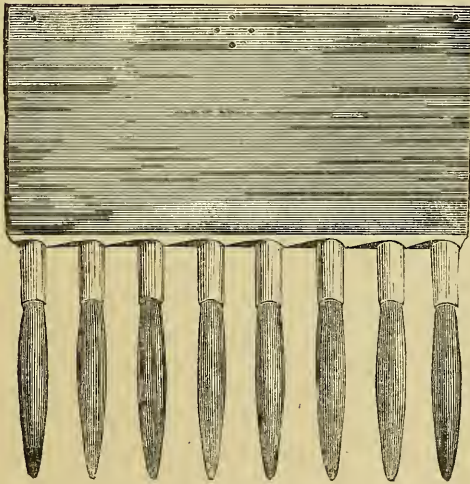
## TOOLS REQUIRED FOR GRAINING.

THERE are certain tools and brushes indispensable in the production of painted imitations of fancy woods ; without which, even the most expert professional grainer would be at loss, and would labor under difficulties. Yet it must be understood that such a workman, through use and skill, by means of a cunning hand and practiced eye, may and does produce effects with means and appliances which the novice could hardly find use for. A good workman may work with indifferent tools ; but the unskilled must avail himself of all the advantages which the best tools and materials place within his reach. First in importance—after the brushes necessary for applying the graining color to the ground work—comes a badger-hair blender and softener—cut of which is herewith shown under its proper name. Second, steel graining combs. A set of these comprises twelve combs, three of which are one inch wide, three two inches, three three inches, and three four inches wide. Each comb in the several widths varies from its companions in the size of the teeth, one in each of the four widths being fine, one medium, and one coarse. Formerly, a few leather combs were considered indispensable ; but now, when coarse combing with clear, distinct grain is required, the result is effected by the use of one of the coarsest combs, the teeth of the same being covered with a piece of cotton rag or cloth. This is in

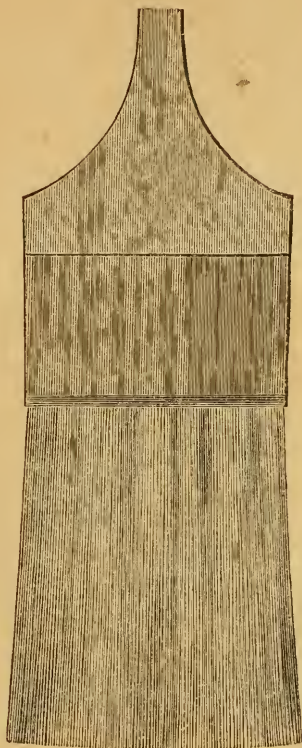
every respect the equivalent of a leather comb. This short list, with a top- or over-grainer—drawing of which is given—comprises all the extraordinary tools required, the rest being common in and about every ordinary paint-shop, and consisting of a painter's duster, two or three flat bristle or fitch brushes, and a piece of clean cotton rag. For graining maple, a tool called a cutter is necessary, and that will be described under the head of Maple Graining. The cost of this set of grainer's tools will be, at the outside, say five or six dollars. It must not be understood that for all kinds of work no other brushes are required or made use of, for the reason that very extended surfaces—such as large stores or warerooms, where the work is to be mostly plain, and when it is necessary to get over the largest possible space in the least possible time—require the use of larger brushes. These, however, will be noted, each in its appropriate place. The reader will not take exceptions certainly to the remark, that to give the names and description of the tools and brushes, is much easier than to teach the lesson of how to use them.



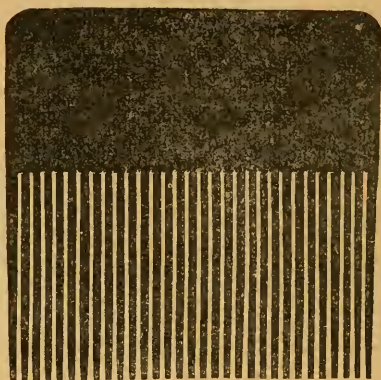
BADGER HAIR BLENDER  
OR SOFTENER.



PIPED MAPLE OVER- (OR TOP-)  
GRAINER.



OAK OVER- (OR TOP-) GRAINER.



STEEL  
GRAINING COMB.



CAMEL HAIR CUTTER FOR  
MAPLE GRAINING.







Light Oak, Veined(or Sap)Work.

## CHAPTER V.

## LIGHT OAK GRAINING.

THE ground color recommended for the imitation of LIGHT OAK is produced by the use of White Lead and pure Raw Italian Sienna. Golden Ochre will do in place of Sienna, but does not produce so clear and soft a tint. The too common use of Chrome Yellow is deprecated, for the reason that the general tendency is to make light oak grained work, too yellow. It will be seen by studying the natural wood, that it reflects, mainly, none of the Chrome Yellow tone. The yellow observable in finished oak furniture, is derived in a great measure from the successive coats of varnish used in the finishing process.

The opinion obtains among professional grainers that the *graining color* should be mixed with special reference to the ground. This is true in a measure; but has not so much significance as is generally ascribed to it. In fact the graining color is less important than the ground work, as a fair job of both light and dark oak may be performed with the dark oak graining color, supposing the ground to be suitable in either case. In making a ground color with White Lead and Raw Sienna, care must be taken to procure the true Italian article, as the so-called American substitute will give a muddy color, quite unlike what is required to secure a good job.

The beginner will not be led away with the flattering thought that his first attempt—however gratifying to his own self-love—will result in a very close imitation of the wood, which he will probably caricature rather than copy. The lights which he will wipe out, will stare stiffly at him when he steps back to indulge in a look at his handiwork, and the shades will frown as if in mockery of his maiden effort; but patient labor and striving for success will overcome most obstacles, and the smallest amount of merit never goes wholly unrewarded. The study for the learner, is not to copy at first, the natural wood; but, the examples of some first-class artist in this line. Mannerism should be avoided, and a habit of putting in always, the same kind and show of work in certain places, as some do. Let there be the greatest variety consistent with good taste. Violent contrasts are to be avoided. The same general tone of color will be preserved throughout. It will not do to have one panel on a door dark, the others being light. True, this might happen in a door of natural wood, but it would not be desirable.

Referring to remarks on page 18 concerning the preparation of the work for the reception of color, and supposing the ground work to exhibit the proper tint, and supposing the learner to have supplied himself with a can of ready-made graining color, he is instructed to take therefrom whatever quantity may be required to do the work in hand, covering the remaining color with turpentine to keep it fresh, and covering the can to exclude the dust and to prevent the evaporation of the turpentine. That portion of the color intended for immediate use must be thinned with oil and turpentine to a proper consistency, which will be ascertained by trying it on the work. A portion of boiled oil will be required in the thinning, but only so much as may be necessary to hold the color back from drying too quickly. Except to secure this, there is no advantage to be gained in using it. The



work will not be any more durable because of the use of an undue proportion of oil in the thinning, and the varnish coat will be decidedly better on a surface without gloss. Ordinarily, graining color is mixed with reference to drying, so as to be ready on the following day for the glazing coat. If it be desirable, to grain and glaze and varnish on the same day, it may be done by the use of Japan gold size, or good Japan dryer; but as much of the Japan in market now, is made without shellac, its use is not advised, except in cases where the operator is assured of its quality and genuineness.

The beginner or learner will at first fall into the error of mixing his graining color too thick; that is, he will use too little thinning; but, as this is most easily remedied, it is preferable to the other extreme. The quantity of color required for one side of a door is almost infinitesimal. Too much color will make the work look muddy and slovenly. It is common to rub in all the panels and panel mouldings before proceeding to put in the work, as the color wipes out better after it has set a little. If the color be quick drying, however, care must be taken not to rub in too much at once, because in such case the work will not comb well or wipe out cleanly. It will work "claggy," to use a grainer's expression. That portion of the surface which is to receive the "veins" or "sap"—which terms will be used when reference is made to that kind of work shown in example No. 1, on page 24—must not be combed until after the work is put in; while that kind of work called "dapples"—as shown in example No. 2, on page 30—requires the combing to be done before the wiping out of the lights.

It will be observed that the "technical" or trade terms used throughout this work are those in common use among English grainers, for the reason that most of the best workmen in this line are Englishmen, who have brought with them to this country the knowledge and skill acquired on the

other side, where a rigid system of apprenticeship, renders good workmen much more possible than with us. The laxity of our system, or rather lack of system of apprenticeship, is a bar in the way of turning out really finished workmen in almost any of the trades.

Allusion has already been made to the difficulties in the way of teaching, by means of written words, any branch of art, a knowledge of which must, after all is said, really be acquired through the perceptive faculties. An hour of practical demonstration would be better than a volume of written instructions! To lead the half-taught learner toward perfection were comparatively easy! But to teach a language that has no alphabet and no grammar, may perhaps prove more fruitless than the writer even, anticipates. With a view to the fullest elucidation of the process, and, to make it, if possible, comprehensible to the greatest novice—to him who has never seen a job of graining performed—it is proposed to begin with the "rubbing in," that is, applying the graining color with a brush, and continue the operation, in regular order of procedure, to its completion.

The tools necessary in the first stage of the work are simply, a moderately stiff brush or sash tool for putting on the color, a dry paint brush or painter's duster for cleaning up the corners, moulds and beads—supposing too much color may have adhered thereto—a soft, clean worn cotton rag for wiping out, and a set of combs for the combing. These comprise all which are really required for the first operation. In practice, the term "rubbing in" will be better understood; the performance being much more like rubbing the color into the ground-work, than like painting in the ordinary acceptance of the word.

All preliminaries being completed, it is now supposed that the door, that being the subject to operate upon, is ready with its well sand-papered coat of pale straw ground,



Light Oak, Dapples.



for the reception of the coat of oil graining color. This must be rubbed in with the paint brush so as to present an uniform surface. The beads, moulds and corners should be stippled with the bristle ends of a dry brush so as not to look dirty and muddy, as they surely will appear if not properly cleaned up. Too much color on any part of the door will make it look "blotchy" when finished. Care must be taken to have the color evenly distributed. In oak graining it will be remembered the grain is shown, not by adding a darker color, but by "wiping out," so as to leave the ground-work clean, the color which remains representing the darker portion of the wood.

The panels will first receive attention, and it is advised as a rule, to show on them such work as that in example No. 2. There will be space enough on the rails and stiles, to show the veined work, and much elaboration is not recommended ordinarily. The *corresponding* panels must be similar in character of graining, and *all* should present the same general appearance. The fact must be well understood, that clean work, with simple straight combing, is much more respectable and workmanlike, than an abortive attempt at display. Almost any man who knows the two ends of a paint brush, may with proper ground and graining colors, turn off a job of grained work, which will not offend good taste, even though it be not a very creditable imitation of the natural wood.

Supposing the panels are to be grained as has been suggested, the first proceeding in order after the application of the color, is to wipe off a part of it in streaks from top to bottom with a rag held loosely in his fingers so as not to wipe the wood clean; then to comb each in its turn with one of the fine combs lengthwise, repeating the operation in a similar manner with a comb still finer than that used in the first combing.



To this point the process will have been simply mechanical ; and such work may be performed by any house painter who can paint a door with plain color in a workmanlike manner. Now it ceases to be mechanical, and becomes a branch of fine art.

The taking out of the lights is done by covering the thumb with a piece of cotton rag, and the thumb-nail becomes at once the most important and useful tool required in the operation. The broader lights will be wiped out with the fleshy part of the finger, and the finer lines with the covered nail of that most useful member, which performs so important a part, that we can hardly imagine a good grainer without at least one thumb.

(The horn tool sometimes used for taking out the lights will be described hereafter.)

That portion of the rag which covers the thumb will, of course, soon become saturated with color, and so will cease to be effective in wiping cleanly. This necessitates the constant uncovering of the thumb, and the recovering it with a clean portion of the rag. When the whole of the rag shall become saturated with color, it must be thrown aside, and its place supplied with a clean piece.

The first attempt will not, probably, prove very satisfactory, and the beginner will learn—if he learn nothing more—how difficult it is to perform what, at first sight, appears so easy and simple. In spite of his best efforts the lights will not resemble the dapples in the natural wood ; but, as practice only makes perfect, so perseverance only will deserve success. If his first effort shall suggest to the beholder anything better than quail-tracks and blotches, he may congratulate himself on his performance.

Supposing the panels to be finished “for better for worse,” the mouldings will be combed plainly, and the middle rail, with the center top and bottom stiles, will come next in

order. These are usually selected for the greatest display of work. The color will be first applied to the middle stiles, leaving the middle and top and bottom rails to be rubbed in each in turn as the work proceeds. The two middle stiles will be finished before putting the work into the middle or broad rail. The color may be rubbed into the top and bottom rails at same time as on the broad rail. In this order of procedure no care will be necessary in wiping the joints, and the color may lap over on the parts not rubbed in, to be cut off at the joints in the finishing stiles or rails, as the case may be.

The necessity of keeping each piece composing the door distinct, and treating each by itself, will be obvious to the greatest novice in the art of graining.

The work of wiping out with the rag, will be continued in the sap, or veined portion, no longer than is actually necessary, as whatever can be done with the coarse comb, will be a clear saving of time; and the operator will see, by looking at the examples, what parts were wiped out, and what done with the comb. In the sap or veined portion of the work, the combing will follow the wiping out, and not precede it, as was the case with the panels. The top and bottom rails will usually be finished plainly: that is, with coarse combing, but not of necessity straight grain. The outer stiles can be heavier and coarser than other parts, and this will finish the work so far as oil coat is concerned.

The oil graining color is now set aside, and the job left to dry, to be ready for the glazing coat, which should be done in water-color, supposing the intention be to varnish at once. Some grainers glaze with a portion of the same color as was used for the first coat, but the use of water-color is strongly advised. Supposing this oil coat to be well dried, a light rubbing over with a worn piece of fine sand-paper is recommended before the glazing. Colors ground in water, and put

up in wide-mouthed bottles, are now obtainable in the color shops, and are more convenient and economical than the same materials prepared in the paint shop. The proper glazing color for light oak is made with Raw Sienna, Burnt Sienna and Vandyke Brown, in such proportions as shall be found best in practice, and the color must be used very thin, and the quantity used must be very small. The operation of glazing is most important, as a good job may be spoiled by unskillful manipulation in this process, as a poor job may be redeemed, in a measure, by skillful handling in the glazing coat.

Much may be done in this process, in the way of remedying any defect in the ground, supposing it shall be found, in finishing, not to have been just what was required—that is, a yellower color may be imparted by using more of the Raw Sienna in the glazing color, supposing a more yellow tone be desirable, or a too yellow ground may be concealed by using more of the Burnt Sienna and Vandyke Brown. The color should not be thinned at once, as was the color for its oil coat, but should be placed on a palette or a piece of board, and thinned by dipping the brush in water as the work proceeds. This is necessary from the fact that in some parts, as with panels, a very thin, light coat of glazing will serve, while on the mouldings, and around the knots, and in the “sap” work, a much thicker coat will be necessary.

The brushes required for this part of the operation, are a top, or over-grainer, and badger blender, as shown on pages 21 and 22, and a common pocket comb. The water-color must be rubbed in with a stiff bristle brush, and softened with the blender, so as not to show any streaks or brush marks. But one panel should be rubbed in at a time, as the thin coat of water-color dries almost as fast as it can be applied. The top grain, which is almost inappreciable, will be put in with the over-grainer, which must, after being dipped in very thin color, be



combed with the pocket comb, so as to separate the bristles into groups, which shall stand apart from each other, forming, as it were, a series of parallel small, thin brushes. The over-grainer, in this shape, will be passed lightly from top to bottom of the panels, after which the blender must be used to soften the harsh lines and give indistinctness to the grain. Great care is necessary in this operation, not to apply too much color, or the effect will be streakiness rather than the almost imperceptible grain required. The glazing or shading must be continued on the rails and stiles, as may be required by the character of the work. These should be darker than the panels, and the moulding should be more deeply shaded than the rails and stiles. The glowing lights around the knots are wiped out of the glazing color, and delicately softened with the blender. This brings the work up to varnishing, which will be treated in a separate chapter, and the utter impossibility of giving anything like a clear conception of this operation of glazing, by means of verbal teaching, would seem to preclude the necessity of any further words upon the subject. Enough to say, in conclusion, that it is to graining what light and shade are to the higher branches of the art of painting. It gives depth, and tone, and glow, and transparency, and, more than any part of the process, requires the possession and development of those faculties which distinguish the artist from the mere mechanic.

The object selected for the operation described, was chosen for the reason that the greatest amount of work is usually done on doors, and a workman who can make a good job on this, will find no difficulty in executing whatever kind of wood-work may come under his hand. In wainscoting, or side-walls, composed of narrow-tongued and grooved boards of equal width, the custom is to put in less work, and to show a greater uniformity than is shown in the separate pieces composing a door. Coarse and fine combing, with here and

there a strip showing dapples and sap-work, is the usual mode of giving variety to the strips composing the wall or wainscot, as the case may be. The glazing coat, however, is mostly relied on to give distinctness and variety to the work. Some of the strips will be left without glazing, while others will be glazed more or less dark, as taste and fancy may dictate. As a rule the boards or strips alternate with quite a degree of regularity, a darker shade between two light ones. This gives a much better effect than to have a group of dark ones followed by a group of lighter ones, or than an occasional dark strip in a group of lighter ones. A good effect is produced on doors and other paneled work, by putting in the panels very light oak and the rails and stiles very dark red oak, the mouldings being in any case darker than the rails and stiles. The moulding, if not too deep and heavy, may be painted with Coach Black, before varnishing, with a gold stripe in the inner flat portion of the same. This gold stripe makes a very good contrast with the light oak panel, and sets off the black better than anything else. This work, however, requires a skillful hand, and is not recommended for novices.

A summary of the foregoing instructions may prove useful to some readers who may not have seen a job of graining performed, and we propose to give, in brief, an outline of the processes in the order in which they usually occur.

The first requisite is a hard, well sand-papered surface, with a properly colored ground.

The tools required are a paint brush, for rubbing in the graining color; a set of steel graining combs; a painter's duster or other dry bristle brush, and a rag, to wipe out the lights.

Next in order is the graining color, and the ready-made colors are recommended for all,—especially for beginners. It may be well to state here, that all graining colors are compounded of Raw and Burnt Italian Sienna, Raw and Burnt

Turkey Umber, Vandyke Brown and Drop Black, in varied proportions according to the requirements of the occasion. It is impossible to give the due proportions, for the reason that these materials, found usually in the paint shops, vary so much in strength, quality, fineness and consistency.

The tools and materials being provided, the next in order of proceeding is the thinning of the color. This can be properly learned only by practice. As a rule, unpracticed hands put on too much color. Use boiled oil and turpentine, and no more oil than is necessary to keep the color from setting too quickly. If the needs of the occasion require the color to dry very rapidly, use a small quantity of good Brown Japan or Gold Size.

Rub in the graining color with a moderately stiff brush. In dappled work comb the surface before taking out the lights. In sap or veined work comb after wiping out. When a stile crosses a rail, the rail being dark and full of work, the stile at the joint or line of contact should show plain combing, and be of lighter color, to contrast with its darker neighbor. This is a good general rule for all oak graining. The oil coat should stand over night to dry. Before glazing, rub the oil coat lightly with a piece of fine, worn sand-paper. Use water-color for the glazing, for the reason, if for no other, that no time must necessarily elapse before varnishing. Raw and Burnt Sienna and Vandyke Brown, in varying proportions, make the proper glazing for both light and dark oak. The tools required in glazing, are a water-color brush, a badger blender, a top or over-grainer, and a rag.

Judgment, taste, skill and practice are indispensable prerequisites to a good job of grained work.

The before-mentioned horn tool, for taking out the lights in dappled work, is simply a straight piece of horn about an inch wide and as thick as a nickel five cent piece. The end, slightly rounded, must be beveled on both sides to a sharp

edge, and kept sharp by rubbing it on a piece of sand-paper, as a carpenter sharpens a tool with a whetstone. The hand not holding the tool must carry a piece of rag, as the horn requires wiping after every application of it to the painted surface. The blade of a horn spatula, such as are common in every apothecaries' shop, offers the readiest means of providing one's self with such a tool as is above described. The ground coat must be well dried, on which the horn is used; otherwise it will be cut up by the sharp edge of the tool.

The two examples of light oak graining, shown in this chapter, are not given as specimens of either the lightest or darkest tones of color, which the natural finished wood presents. For inside work a lighter color would be preferred, and for outside work, such as doors and vestibules, a somewhat darker tone. The custom, however, obtains in the cities of New York and Brooklyn, of finishing such portions of domestic architecture as those just named, either in very dark oak or black walnut imitations.

The examples given herein, both of ground tints and graining, are not presented dogmatically, but rather suggestively, as worthy of imitation by those who have no knowledge or idea of anything better; and these words are not for those who are skilled in the art, but for the unlearned—the uninitiated. Not to him who is able to be a teacher, but to him who is desirous of receiving instruction. As a fine art, graining becomes subject to the rules which govern art generally, if it be admitted that true art has lines and bounds; and, paradoxical as the utterance may seem, there is no hesitation in declaring that the best efforts, or attainments in this line, are not those which most closely resemble the natural wood.

The ground-work shown on the succeeding page is supposed to be light enough for any of the following named woods, and we propose to exhibit only this as a proper ground for them all, viz : Light Oak, Maple, Satin wood and Ash.





## CHAPTER VI.

## DARK OAK GRAINING COLOR.

THERE is not a word to be said instructively under this heading, which has not been fully given in the foregoing chapter. With the exception of the different ground and graining color, every word used in describing the process in light oak graining has equal significance in this. The examples which are presented with this, one of veined or sap work preceding the chapter, and the dappled work following, will be adjudged by many professed grainers as showing too much of the red. As this is a matter wherein every one may indulge his taste or fancy without loss or cost, we have purposely presented the reddest samples, and would suggest to the reader that he may choose wherever he will between the two extremes of light oak and dark oak.

The ground for these illustrations is made of pure White Lead, Golden Ochre and Royal Red. Deep Orange Chrome in place of Golden Ochre is sometimes used for ground for dark oak, when a very bright tone is desired. The graining color is composed of the same materials as the graining color for light oak, viz: Burnt Sienna, Raw Sienna and Vandyke Brown, differing only in proportion.

The reader, he who would become a grainer, or he who would add to his stock of already acquired knowledge, must not suppose because of his having the names of the materials required to make a graining color, that he has



only to procure a can of each of these at the shops, and proceed forthwith to make what is demanded, both in tone and working quality. Unfortunately the chances are decidedly against him, and he will, in a majority of cases, get what he does not want, rather than what he does want. It is a lamentable fact, that the ground colors offered for sale throughout the country, are not, as a rule, what they purport to be.

The bulk of the so-called Raw Sienna is little better, if any, than commonest Yellow Ochre; the Burnt Sienna is hardly better than Venetian Red, while the Vandyke Brown is composed of what? "Nor gods nor man can tell!" Now to require a workman to make a good job of graining with such materials is quite as unreasonable as was the requisition on the part of the Egyptians that the captive children of Israel should make bricks without straw.

As a rule, dealers in paints buy ground colors bearing the names of the required articles, without regard to quality: that is, they purchase what they can buy most cheaply and sell most dearly, and it rests with the consumer to demand and receive that which he knows to be good, or at least that which has a good reputation. In view of the fact that the most skillful and experienced painter cannot do a job of plain painting, well, without good materials and tools, all will see the utter importance of the best materials to the unpracticed hand or the novice.

Calling attention to example on page 43, we would say, there are many little arts and devices which the skillful grainer almost instinctively makes use of, which must be seen to be appreciated—which cannot be signified in words. It is as impossible to embody these in words, so that they would be comprehensible to the senses, as to describe, by verbal signs, the delicate manipulation whereby the artist causes the senseless canvass to almost glow and breathe under his inspired touch.





Dark Oak, Sap (or Veined) Work.



The *flash* lights, which seem to come like opalescent gleams from far below the surface, are the most superficial of all the colors, being wiped out of the glazing or shading coat.

It would be pleasant to tell so plainly, just how and where these flashes should appear, and the mode of producing them, that the uninitiated could go at once and do likewise; but as this would be an impossible task, we present what few illustrations are possible in a book of this contracted volume and low price, suggesting that higher reaches and attainments than these are to be arrived at only through patient study and much practice.

It has been said before in these pages, that hardly two professed grainers will agree as to the exact tone for ground for any one of the fancy or colored woods. In many, perhaps most cases, this fastidiousness comes more from willfulness, stubbornness or vain conceit, than from reason. A grainer must indeed be weak in resources, who cannot do a fair job of graining on any ground, supposing the same to be light enough and not decidedly *off color*. Many of our professed grainers are real artists, and execute with true artistic fervor; while too many, alas! are thoroughly mechanical, and among these latter will be found, those who are most captious and fastidious as to tints of ground and color.

The sample on page 49 is offered as a proper color for dark oak ground.

## COLOR HARMONY IN GRAINED WORK.

THERE are some who will read this book, no doubt, whose knowledge of COLOR HARMONY has not been improved, either by study or practice; and all readers may perhaps be benefited by a few words on this most important subject. It is unquestionably essential that every painter should know what plain colors and tints may be used in harmonious contrasts or combinations with the various painted imitations of fancy woods. Green is entirely unobjectionable, indeed, it forms a most pleasing contrast with Light Oak, Satin-wood, Birds's-eye Maple, Chestnut and Ash—but discords with Mahogany, Black Walnut and Rosewood. Blue is entirely harmonious with all these latter. Black harmonizes with all the woods as does white; but white with the lighter colored ones is feeble and wanting. All the woods harmonize with each other except Black Walnut with Mahogany and Rosewood. Gold is good with all, but the contrast with the light-colored ones is not so brilliant as with the dark-toned woods. The bright colors in these, deaden the usually dull tones of Black Walnut and detract from it thereby; whereas the contrast with the latter named wood, with the light colored ones, improves and brightens all the contrasting tints and shades.

Light and Dark Oak are best shown by themselves in contrast with each other, being too coarse in the grain to exhibit with good effect in combination with Maple and Satin-wood.

In Color Harmony, generally, white and black harmonize with all colors but green. Gold is good with every color, shade and tint, but especially rich with green, black, purple, carmine and blue.





Dark Oak, Dapples.





Dark Oak Ground.





Both ends closed

## CHAPTER VII.

## BLACK WALNUT GRAINING.

THIS wood—now so common in every household, so extensively used, in doors, wainscoting and furniture of every description—has become the *mode*, within the last ten or fifteen years. Previously it was held in slight estimation, was used only for very common purposes, and no one dreamed that this cheap and common domestic tree would become the successful rival of the aristocratic rosewood and mahogany.

In BLACK WALNUT graining no two workmen seem to agree as to what the prevailing tone should be. The wood itself presents so great a variety of tones and shades, that when the mind seems about to accept a certain shade as the best imitation of the natural wood, a sample presents itself which upsets all preconceived notions, and the inquirer finds himself “all at sea again.” The general tone of the wood, as seen before being worked, is a blackish brown, and the beholder would hardly suspect the presence of a rich red undertone; almost as bright as the glowing red of mahogany. Yet such is the case, and in almost any large piece of furniture some parts will show a decidedly reddish ground. This red glows out from underneath the brown surface, and cannot successfully be shown in the graining color. It must therefore be provided for in the ground-work, which should be sufficiently red to represent those pieces of the wood which exhibit the reddest tones of color.

Black Walnut is imitated on every variety of colored ground, from straw color to drab. We suggest, as the most proper tone for imitating this popular wood, a ground-work made of White Lead, with Golden Ochre and Royal Red and Black, like example shown on page 61. The reader will bear in mind the fact that there exists in this case no difficulty in covering and concealing with the almost black graining color the ground-work, however bright it may be. So, it will be best to err on the side of a too bright ground, rather than one which is too dull to represent the brighter specimens of the natural wood.

There can be no question as to the mode of painting most proper for producing the best results in Black Walnut graining. The wood is what is called soft-grained, and does not present the sharp lines and clear grain observable in light and dark oak. Therefore it can be best imitated in distemper graining; but as this process is more difficult than oil graining, and requires more skill in successful manipulation, we shall treat it only incidentally, confining our teachings mainly to graining in oil.

Supposing the ground-work to be of the right tint, the next proceeding is to go over the work with a coat of Vandyke Brown, and Drop Black ground in water. All the colors used in graining may be obtained from the dealer, ready ground in water, for less cost than would be involved in preparing the same in the paint-shop.

This coat of water color, while yet fresh, must be broken into grains by stippling with a painter's duster or other dry bristle brush. For the information of those who are unfamiliar with this word, or the operation which it signifies, we would remark that stippling is simply the pouncing of the whole surface with the ends of the bristles composing a painter's duster or other brush.

When this stippled coat of distemper color, so-called,



Black Walnut Penciled.



has become dry, the work will be ready for the application of the oil graining color. It is taken for granted that the workman will have supplied himself with a can of ready-made graining color, and that no mixing is required, except to thin with boiled oil, and turpentine in such proportions as practice alone will teach properly. It need only be said in this connection that just enough of oil should be used to prevent the color from setting too quickly, when the intention is to wipe out the lights with a rag, after the manner of oak graining, which is not the mode we shall recommend. It will be borne in mind that in Black Walnut graining the imitation is always darker than the natural wood, for the reason that wood of this kind used in domestic and other architecture, and also in furniture, is usually finished with some varnish or polish which stains, and deepens the tone. The effect of the varnish, too, is to bring out the red undertone, which is not observable in the new, unpolished or unvarnished surface.

The oil graining color, thinned to proper consistency for application to the distemper or water color, may be rubbed into each panel or other piece successively, and finished before rubbing in any more; or if the color be slow, the whole door-side may be rubbed in before putting in the veins. The panels and pieces composing the door must be treated, in one sense, individually, and in another, collectively. That is, each must have its individual character, but not without reference to the work as a whole. With whatever of variety, there must be a certain uniformity.

That portion of the surface of the work which has been rubbed in with the graining color, is ready for what we are pleased to call the hand of the artist. The oil graining color may be left to set a little before proceeding with the work of putting in the veins and figures. There are two modes of doing this. One is to wipe out the lights, as in oak graining,



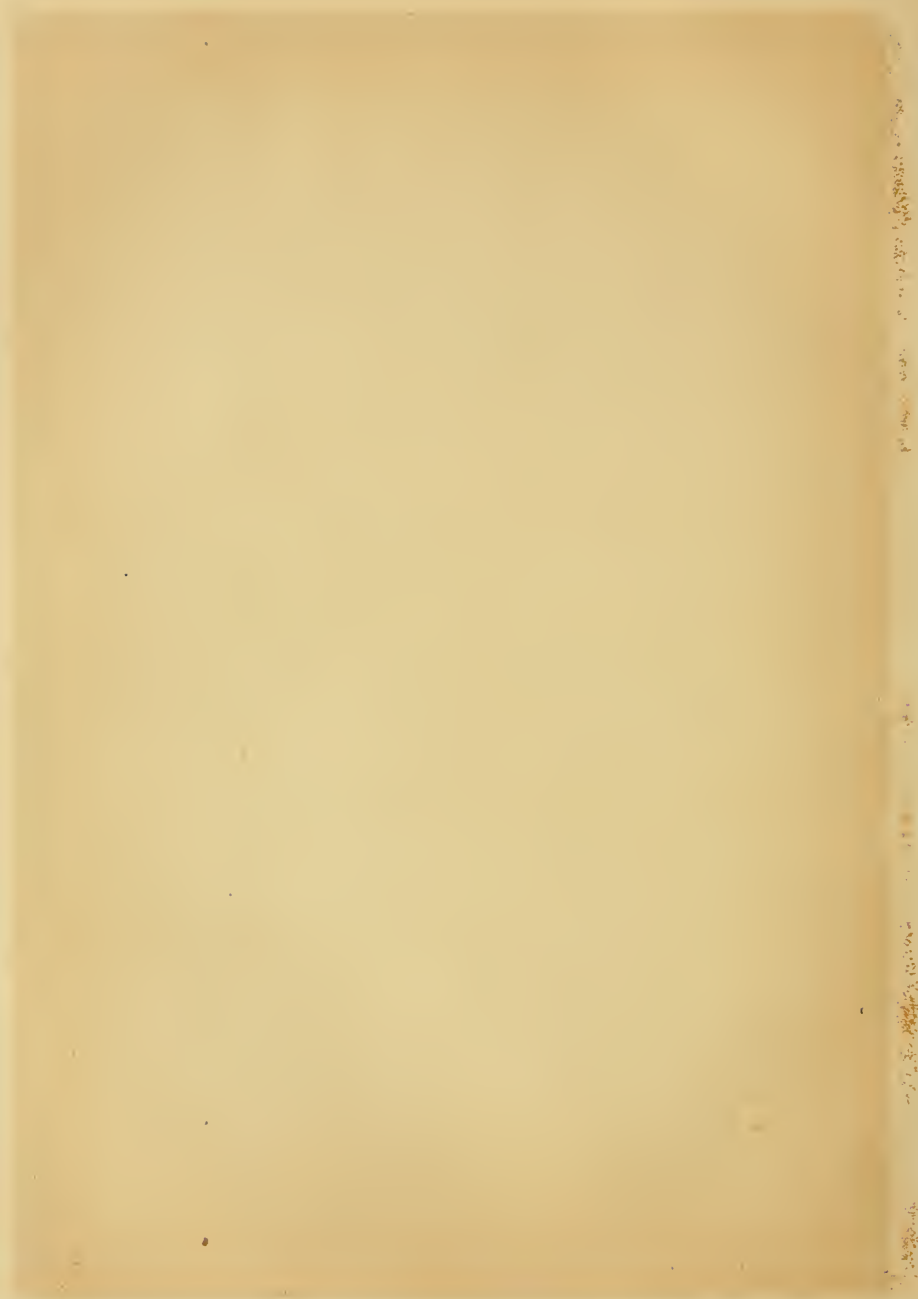
the other, to put in the darker veins with a sable or camel-hair pencil. The former mode is not recommended, for the reason that the darker veins cover so small a proportion of the surface, that wiping out the lights is to wipe off nearly all the color which has been applied. The example on page 53 will convey the idea better than it can be done with words. There, may be seen the veins put in with a sable pencil, the same graining color being used as for the oil coat, thicker, of course, and consequently less transparent. As these veins are put in, they should be softened with the badger blender, the proper manipulation of which comes easy after a little practice. This portion of the work requires not only more time, but more skill, than any other, and with the glazing and shading is really that part of the operation which demands a cunning hand and a practiced eye.

After applying the coat of oil graining color, it is common to wipe with a rag some of the color from the work from top to bottom of rail or panel, as the case may be, to give variety and a more woody appearance to the job in hand. If it were possible to tell just when and where this should be done, the writer's task would be comparatively easy; but this knowledge will come only through close observation of the natural wood, or the work of some accomplished grainer. Much of the graining, even in the best jobs, will of course be done plainly and quickly. A painter's duster or other brush, drawn lengthwise of the rail or stile, or diagonally across the same, and softened with the blender, will be all-sufficient to make a good enough imitation for a considerable portion of the work. Care must be taken not to elaborate the job too much, or it will look finical, petty, inartistic. Too much plainness, on the other hand, will give the work a careless, slovenly, unworkmanlike character. It is important that proper care be taken as to the joints; each separate piece





Black Walnut. Wiped Out.



of wood must be shown by and for itself. The graining on the stiles of a door must not lap over the rails, but go cleanly and sharply along the joint lines. The oil coat will be left to dry over night or a day or two, as may be convenient, before the glazing coat, which will be water color, composed of Vandyke Brown and Drop Black. The mode of procedure in the finishing operation will be the same as described under the caption of Light Oak Graining.

The water color will be rubbed in one panel or piece at a time, and stippled with a dry brush, and blended with the badger hair softener, more or less color being applied as the nature of the work may require. It will be observed that there is a much greater uniformity of tone in Black Walnut than in either light or dark oak, this wood being singularly free from knots and gnarled places or spots. The use of the comb may be entirely dispensed with in Black Walnut graining. Mouldings and carved work must always be glazed, so as to show darker than the surrounding surface. The top or over-grainer may be used for putting in the veins on straight work, as rails and stiles of doors and wainscoting, with a view to economy of time; but to make good work with it, requires a practiced hand.

A bit of sponge is a useful article in all kinds of water color graining and glazing.

A summary of the foregoing directions for graining Black Walnut shows as follows:

A ground color, made of pure White Lead, Orange Chrome Yellow, or Golden Ochre and Royal Red and Black.

A stippled coat of water color, composed of Vandyke Brown and Drop Black.

Oil graining color, composed of Vandyke Brown, Burnt Sienna, Burnt Umber and Drop Black. Ready-made graining colors are recommended as best and cheapest.

The oil color may be applied as soon as the stippled coat

of water color is dry. The veins are put in with a pencil on the fresh oil coat, and blended to soften and give them indistinctness.

When the oil coat is dry, it should be lightly rubbed with worn fine sand-paper and a glazing coat of water color, mixed the same as for first stippled coat, should be applied. This must also be stippled, and softened with the blender.

Let the ground color be light enough to show the lightest specimens of the wood, trusting to a greater depth of color to represent the darker pieces.

When a large surface is to be grained cheaply, employ a large paint-brush for rubbing in, and an eight-inch kalsomine brush for stippling, using the flat side of the bristles, and not the ends, thereof.

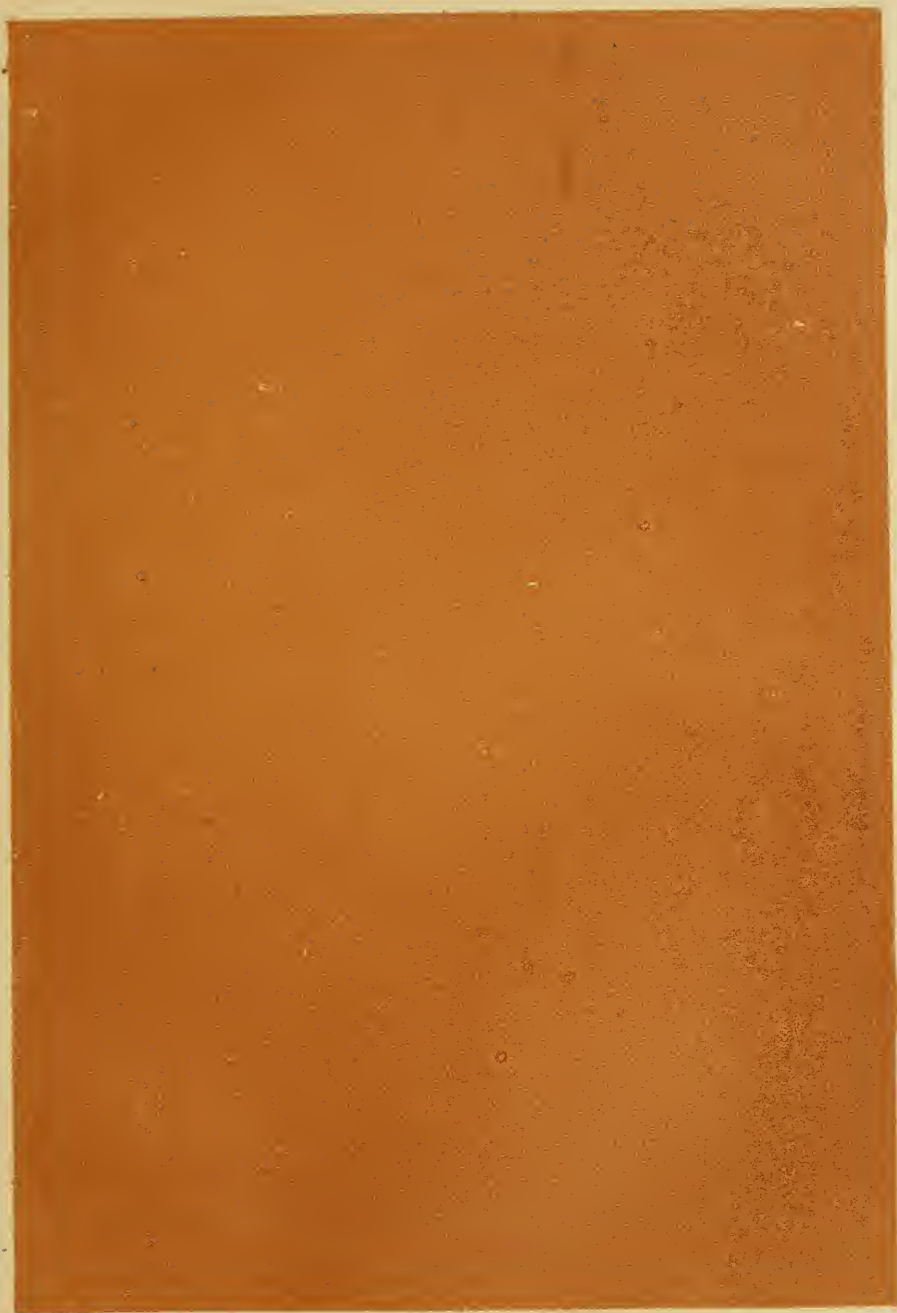
For glazing, water is always better than beer as a thinner, whenever it will hold the color, as beer has a bad effect on the first coat of varnish.

The sample on page 53 shows Black Walnut graining, with the veins put in with a pencil, while that on page 57 shows the wiping out process as practiced in oak graining, the ground and graining colors being the same in both instances.

A job of Black Walnut graining may be finished in one day by the free use of Japan or Gold Size in the oil coat.

If the work is to be finished without varnish, the glazing coat must be of oil graining color.

For ground-work color for Black Walnut see page 61.



Black Walnut. Ground.



## CHAPTER VIII.

## ASH GRAINING.

UNTIL within a few years there has been no demand for painted imitations of this very useful and in some of its presentations beautiful wood.

It has of late, more and more, come into use in the interior finish of railroad cars and carriages, and of houses and domiciles. The latter named fact has consequently, created a demand for the painted imitation of this wood, in cases where the use of the natural wood from whatever cause was not deemed expedient.

The question as to the economy of natural wood, against painted imitations of the same, will probably remain for a long time unanswered. First cost, with the great majority of house owners, who have the bills to pay, is of prime importance. A domicile constructed of soft pine wood, may be left for a time unpainted without any great detriment to comfort or to the health of the occupants, and painting will be in order at any time subsequent to occupation, whenever the wishes and disposition of the occupants may be in accord with the saved up money wherewith to pay the painter's bill.

Graining or grained work is of all the various styles of painting the most economical, because such work, properly performed, will last an indefinite period and stand the washings and wipings and house cleanings to which interior painting



must necessarily be exposed—without becoming spoiled or damaged. Plain colors could be as surely and well protected as grained work by coats of varnish : but the varnish would discolor the tints unless they should be quite dark, and plain colors, such as would be suitable for finishing the interior wood-work of a dwelling house, would not look well or be in accordance with good taste if finished with a varnished surface.

Ash wood, being cheaper and more easily worked than oak, is frequently used as a substitute for the latter, which more than any other woody growth it closely resembles. Indeed there are many not unaccustomed to familiarity with furniture and other joined work, who cannot always distinguish between these two woods.

Ash, may be imitated on the same ground color as that shown on page 39, and all the instructions given for light oak graining may be followed, the same as if they were written especially for this, excepting that the dapples which give such an agreeable diversity to oak wood are entirely wanting in ash.

The work for ASH GRAINING has the same colored ground, undergoes the same preparation, and the same process of wiping out and combing to show the veins and grain.

It would seem that no further directions or instructions can be given as to the best method of proceeding to obtain a good imitation of this wood.

The painter is advised not to attempt to make his own Ash graining color, if it be possible for him to obtain a can of ready-made color, for the reason that he will experience great difficulty and spend a good deal of labor in making that which he may obtain ready-made to his hand.

The use of this wood is so common, and the American ash varies so little in its grain and tone of color, that the workman is advised to procure a piece of ash with a planed

surface, to fill up and varnish the same, and to use it as an example for imitation.

The illustration shown on page 67 is done with ready-made graining color used on a ground similar to that shown on page 39. The occurrence of knots in ash is not unfrequent, and the knots themselves are commonly very dark in contrast with the surrounding parts. These knots, with their accompanying tints and complication and bright flash lights, give to the wood all those beautiful diversities which render this common material worthy of imitation.

There is a species of this wood, called Hungarian ash, now in common use in the interior finish for passenger cars. This is applied wholly in the shape of veneers, and exhibits a wonderfully diversified grain, the same being beautifully and intricately curled and tinted. In tone of color, both in ground-work and grain, it does not differ from the common American growth.

# Test of the Purity of White Lead.

Important to Painters, Architects, Builders, Dealers in and  
all Consumers of Paints.

The following is an **INFALLIBLE** and **SIMPLE** Commercial Test of the Purity of  
White Lead :

Take a piece of firm, close-grained charcoal, and near one end of it, scoop out a cavity about half an inch in diameter and a quarter of an inch in depth. Place in the cavity a sample of the Lead to be tested, about the size of a small pea, and apply to it continuously the *blue* or *hottest* part of the flame of the blow-pipe ; if the sample be strictly pure, it will in a very short time, say in two minutes, be reduced to Metallic Lead, leaving no residue ; but if it be adulterated, even to the extent of ten per cent. only, with oxide of zinc, sulphate of baryta, whiting or any other carbonate of lime, (which substances are now the only adulterations used,) or if it be composed entirely of these materials, as is sometimes the case with cheap lead, it cannot be reduced, but will remain on the charcoal an infusible mass.

Dry White Lead (carbonate of Lead) is composed of metallic lead, oxygen and carbonic acid, and when ground with linseed oil forms the White Lead of commerce. When it is subjected to the above treatment, the oil is first burned off, and then at a certain degree of heat, the oxygen and carbonic acid are set free, leaving only the metallic lead from which it was manufactured. If, however, there be present in the sample any of the above mentioned adulterations, *they* cannot of course be reduced to metallic lead, and cannot be reduced by any heat of the blow-pipe flame to their own metallic bases ; and being intimately incorporated and ground with the carbonate of lead, they prevent *it* from being reduced.

It is well after blowing upon the sample, say half a minute, by which time the oil will be burned off, to loosen the sample from the charcoal, with a knife blade or spatula, in order that the flame may pass under as well as over and against it. With proper care the lead will run into one button, instead of scattering over the charcoal, and this is the reason why the cavity above mentioned is necessary. A common star candle or a lard oil lamp furnishes the best flame for use of the blow-pipe ; a coal oil lamp should not be used.

By the above test, after a little practice, so small an adulteration as one or two per cent. can be detected ; it is, however, only a test of the *purity* or *impurity* of a lead, and if found adulterated, the degree of percentage of adulteration cannot be well ascertained by it.

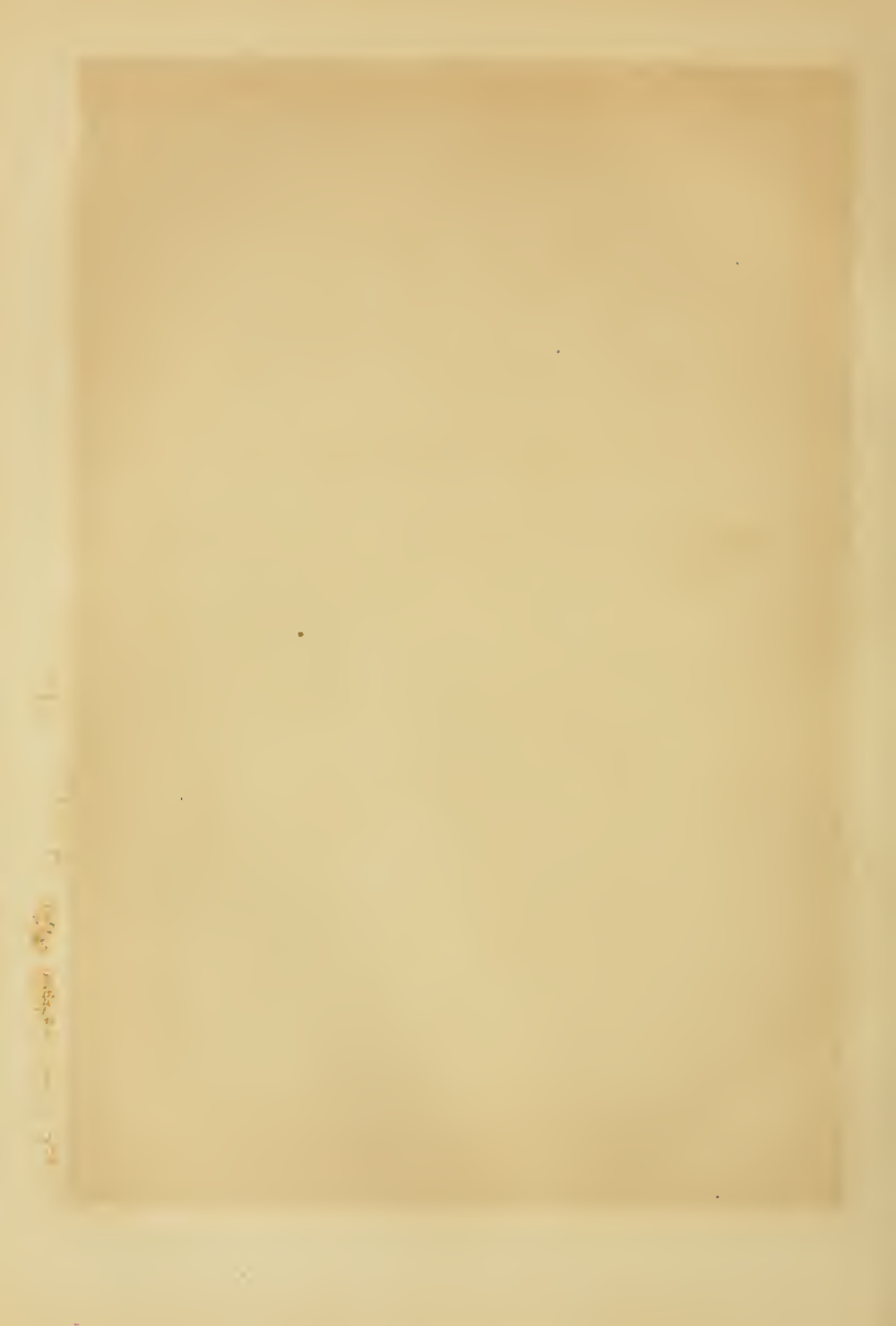
Jewelers usually have all the necessary apparatus for making the test, and any one of them can readily make it by observing the above directions, and from them can be obtained a blow-pipe at small cost.

If you have no open package of the lead to be tested, a sample can most easily be obtained by boring into the side or top of a keg with a gimlet, and with it taking out the required quantity ; care should be used to free it entirely from the borings or particles of wood, and it should not be larger than the size mentioned ; a larger quantity can be reduced, but of course more time will be required, and the experiment cannot be so neatly performed.

Although the above description is necessarily somewhat lengthy, this test is really very simple, and any one can very soon learn to make it with ease and skill.



Ash Oil Graining.





## CHAPTER IX.

## CHESTNUT GRAINING.

THIS chapter will finish our direct instruction for oil graining, and will necessarily be brief, from the fact, that there is little to be said on this, that has not been already repeated under Light and Dark Oak, excepting the direction for making the ground and preparing the graining color. The writer confesses himself at loss to understand why any person should desire or require the imitation of this coarse and sickly-yellow looking wood; but "every one to his taste," is perhaps a good motto, and we will not quarrel with the man who would even imitate spruce or hemlock, with grained work.

The ground for CHESTNUT is decidedly more yellow than any which has been shown or described, and it would seem to require a glazing of yellow to make a really close imitation of the natural wood. White Lead with Yellow Ochre and little Orange Chrome will give the best tint for ground-work, and for graining color Burnt Umber with a very little Vandyke Brown and Burnt Sienna makes the best graining color. Ready-made Chestnut graining color can be procured at the shops, and its use is advised in preference to the making up of the color by the painter.

This wood is generally of very coarse grain, being of more rapid growth than any of the other so-called hard woods—while it presents a greater degree of sameness and want of



variety. It should be imitated by wiping out after the manner of oak graining and the use of coarse combs. The best study is a piece of Chestnut board, planed and filled up and polished. We have never seen a grainer who took any particular pride in his ability to make a good imitation of this wood, and we cannot therefore recommend as copy for the beginner, specimens executed by any first-class workman.

In view of the fact that the cost of imitating this cheap and common wood, is as great as is the cost of painting in imitation of oak, black walnut or other woods which are worth imitating, the query still remains unanswered, why do people require painted imitations of this very ordinary and plain looking wood?

## CHAPTER X.

MASURY'S NEW SYSTEM OF GRAINING ON UNPAINTED PINE  
WOOD SURFACES.

THE first work of this kind which ever came under the writer's notice was performed by himself, and he therefore reasonably concludes that the same will be a novelty to the trade. The peculiarity of this new manner of graining is the application of the *graining colors* directly to the unpainted PINE WOOD surface. The tint of new white pine gives as good a ground-color for light oak graining as can be desired, at the same time not being objectionable—under the proposed mode of treatment—for dark oak and black walnut.

The operation consists simply in giving to the work one coat of glue size, and applying the graining color in the same manner, as heretofore described under the title of Light Oak Graining.

In this method—referring to black walnut—the stippled coat of distemper color must be dispensed with and the oil color applied directly to the ground.

To prepare the glue size, take a handful, more or less, as may be required, of *white* glue and throw the same into a clean pail or other vessel, cover with cold water and let stand over night. Next morning pour on boiling water, apply a moderate heat for a few minutes, and the whole will become thoroughly dissolved and homogeneous. Let this be

of strength sufficient to bear out the graining color long enough to permit the combing and taking out of the lights, and also strong enough to cover the knots and resinous places, so that the varnish coat will not remove the graining color therefrom. A little practice will make perfect in this respect.

The graining color may have a greater proportion of oil than is recommended for graining on painted surfaces, as the wood will be—notwithstanding the coating of glue—more or less absorbent. It is advised to rub in and grain one panel or other piece, at a time; at least, until the operator shall have learned by experience how long the color will “bear out,” without setting to that degree that it will not comb and wipe. As much graining color—thinned with boiled oil and turpentine—should be used as possible, consistent with the proper tone of color for the light oak parts, for the reason, that the heavier the graining coat the better body will there be for receiving the varnish coat.

For black walnut, the first application of graining color should be stippled, as is directed for the distemper color in ordinary black walnut graining; and the veins put on the stippled coat when fresh, the blender being used to soften, as before described.

The beginner will find it not difficult to trace the veins, which will show plainly through the color, and the practice will be good, for the reason, that tracing the *natural* veins will familiarize him with the shapes and directions which the grain takes on, in the growth of the timber. This applies not to oak, but to black walnut, the grain of which is not unlike that of White Pine.

The first coat being well dried, should be rubbed lightly with fine worn sand-paper, and the glazing or shading coat may be either oil color, as was the first coat, or distemper, as in the ordinary way. Oil is advised for the reason before

given—to make a better body for the varnish coat. It will be well to leave the work for a day or two before applying the varnish, which should be carriage, and not quick, hard drying furniture varnish. Two coats of varnish are advised, as the extra wearing quality of the job will more than repay the cost of the second coat.

It must not be supposed that work done in this way will present the finished appearance of grained work done on three or four coats of paint: but it enables the unskilled grainer to make a clean job at the least expenditure of time and money, and a job which will prove vastly more durable than the best job done in the ordinary way, because the color being ingrain with the wood, will not chip off and show the lighter ground work underneath the darker graining color. The system is not offered as the equivalent of, or as a substitute for, the best grained work as ordinarily performed; but as a cheap and ready mode of producing a smooth and durable surface in houses where white and light tints are not specially required. The writer exhibits specimens of this style which pass among experts as good jobs of grained work, and many are slow to believe that it is done on an unpainted surface of common White Pine. In any event a trial will cost nothing, as in case the result shall not prove satisfactory, the color and varnish already applied will make a good foundation to paint upon.

## CHAPTER XI.

## DISTEMPER GRAINING.

THIS term "DISTEMPER GRAINING" is imperfectly understood by most people who use it, and there seems to be a general disposition to look upon it as largely, if not wholly, insignificant. Its proper definition is—a method of painting wherein some vehicle other than water or oil, is used for thinning the pigments. Its application, however, is to all kinds of graining—and to that work only—where non-waterproof thinning, such as beer, alcohol, glue size, &c., are employed in place of oil, varnish, or substances of like nature.

Formerly, all imitations of wood and marble were done in Distemper, oil graining being of comparatively recent date. The advantage of Distemper Graining is, that no time (so to speak) need necessarily elapse between the putting in of the work and the varnish coat.

For certain kinds of the hard close-grained woods, such as maple, mahogany, satin-wood and rosewood, the best effects are produced by the use of water colors, rather than oil graining colors, while for the open coarse-grained woods, as oak, ash and chestnut, the oil colors are decidedly preferable. There are several modes of procedure in Distemper Graining, all of which will be treated more or less fully in succeeding chapters.

## CHAPTER XII.

## BIRD'S-EYE MAPLE.

THE wood of this very respectable native tree, is, with its close, fine texture, its delicate, soft-toned ground and shadings, and pencilled, sinuous grain, altogether the most beautiful of what are called the light colored woods. Painted imitations of it should always be executed in distemper or water colors on a very smooth ground of almost white, but just turned toward a buff with the addition of the slightest quantity of Italian Raw Sienna. A lighter tint even than that on page 39 would not be objectionable. Some grainers use a white ground, but it is not recommended because it gives a sharp, harsh character, which does not belong to the natural wood when finished and polished.

Raw Italian Sienna, with the addition of Burnt Sienna and Vandyke Brown, gives the proper graining color for MAPLE. The Raw Sienna of course forms the bulk of the material. The ground should be rubbed very smooth with fine sand-paper. The amount of graining color required is very small, and the work must be rubbed in one panel or piece at a time. There are several modes of taking out the lights. The one recommended is by means of the tool made expressly for this work, called a Cutter, and shown on page 22. The tool is drawn over the work longitudinally of the panel or rail, or stile, as the case may be, and the sides of the Cutter are alter-



nately raised and lowered in its passage, in order to wipe out in the manner shown in example on page 77. The work is then blended with the badger, crosswise, from left to right, but not in the direction of the tool. That is: the blending or softening must be done transversely to the direction or path of the Cutter. This brings the work to that point where the use of the "Piped Maple over- (or top-) grainer," as shown on page 21, comes into use. The pipes, it will be seen, keep the pencil points apart or separate, and there is nothing to be done but to make the proper color for the over-grain, and to draw the over-grainer with an undulating, sinuous motion from top to bottom of the panel. When the writer was a boy, the custom was in Maple Graining to take out the lights by rolling a wet sponge from top to bottom, and to put in the bird's-eyes by dabbling the wet surface of the work with the four fingers held more or less loosely or in contact. This, to say the least for it, was an expeditious mode of procedure, but we are inclined to the opinion that like almost everything else obtained at little cost, it was little worth. The putting in of the bird's-eyes to an imitation of Maple is a somewhat delicate operation, and to produce good results requires a cunning hand. The best tool for this purpose that has ever come under the observation of the writer is a piece of woolen cloth, say broadcloth, so folded as to present on the end of a somewhat sharp angle, a form similar to the eyes shown in sample

The operation of folding the cloth is extremely simple to the sight, but not so easily made intelligible by a verbal description. With not a few misgivings as to the success of the experiment, the writer will attempt to describe the operation.

Take a piece of woolen cloth, about as large as the hand, lay on a table and fold in the middle lengthwise, bring the two edges together toward the body, leaving the fold away from the body: then at a distance of about two inches from



Birds-Eye Maple.



the right hand end, fold the cloth over upon itself, so as to bring that portion of the folded edge which is held in the fingers at right angles to the part held under the left hand, forming at the right hand an imperfect triangle; this will be continued until the cloth shall take on the shape of a flattened horn, so-called, such as fancy candies are wrapped in sometimes. The sharp end, when applied to a small quantity of color spread upon a board or other flat surface, will retain enough to form a minute incomplete circle or eye which, as well or better than any other readily available means, will imitate the eyes or dots in the natural wood. By looking at the example on page 77 it will be seen that these eyes are not put in without regard to arrangement. Each eye has its proper place, which place will be readily found by consulting the illustration. Remember, *the blender is not used after* the eyes are put in. What seems to be the shadow of the dark spot is the color which the Cutter did not remove, and which was softened crosswise, from left to right.

Bird's-eye Maple is exhibited mostly in shops and offices where showiness is required and in panels only, the rails and stiles being either warm-toned black walnut or, better, rosewood. The mouldings may be cut in with Scarlet Vermilion (true) before the finishing coat of varnish.

The tree which affords this wood is the well-known sugar maple (*Acer saccharinum*) so common in the more Northern States.

The time will probably come when this tree will possess a greater value for cabinet and joiner work than for the crop of sugar which it yields. Its use at present is confined mostly to panels for cabinet furniture and linings for drawers in the shape of veneers.

## CHAPTER XIII.

## MAHOGANY GRAINING.

THE almost total disuse of this beautiful and serviceable wood for cabinet work and internal domestic architecture generally, and its substitution by black walnut, is and must remain one of those freaks or caprices of fashion which no man can account for. So entire and complete has been this banishment, that one may travel round the ordinary routine of daily life for months without seeing a piece of furniture composed even in part of this once fashionable and aristocratic wood.

Painted imitations also have gone out with the original, and a professed grainer might not in the course of years be called on to do a piece of grained work in imitation of MAHOGANY; whereas, a few years ago to imitate Mahogany successfully was considered the highest reach of the grainer's art.

For painted imitations of this wood a bright ground is required which may be best produced with extra deep Orange Chrome Yellow and Royal Red. The graining color is made with Burnt Italian Sienna and a little Vandyke Brown. The grain is put in with various means and tools, according to the kind or variety of the wood to be imitated. In *doors* and other paneled work, what is known as crotch work, is generally displayed, similar to that shown in example on page 81. In this the lights are taken out with the Cutter, as shown on page





Mahogany





22, and for this purpose the use of this tool is advised as the best of all the various methods which ingenious workmen have devised for this purpose. We could tell of a dozen others, but as the result would be to mislead rather than to elucidate, we refrain. The top, or over-grainer, such as used in oak graining, is a most important tool in Mahogany graining, and the proper use of it readily comes with practice. It must not, however, as in its application to oak, be broken or separated in distinct comb-like teeth, but must be kept as much as possible in its natural or dry state. The fine lines which are put in with the top-grainer, do not as in oak panels proceed in straight or nearly straight lines from top to bottom, but commence at the bottom on the left hand side of the crotch, and are carried with a slightly waving motion at a pretty sharp angle to the centre of the crotch, and brought down on the right hand side and terminated at the bottom or sides of the panel. The first lines will commence of course at the bottom and terminate there; but as the graining is continued up the panel, the grain will necessarily commence at the side and terminate on the opposite side at the same height or level.

Some grainers use Vermilion or Orange Mineral for making ground for Mahogany; but our opinion is, that the colors recommended are sufficiently bright, and that the brighter colored pigments are not necessary or advisable.

The rails and stiles in doors and paneled work, may be grained with the blender by drawing it over the fresh graining color either continuously, or by arresting its progress every three or four inches, bringing it to a full stop and then proceeding again. In this as in all kinds of painted imitations of natural woods the badger blender plays a most important part. Graining cannot be done without it any more than it can be done without a paint-brush or colors. It is the principal and valuable means to produce effects which are almost or quite unattainable without it.

Supposing the graining—that is the first application of distemper color—to be finished and dry, the varnish coat is next in order. This may be a very thin coat, just enough to hold the distemper, and the varnish should be what coach painters call “*quick rubbing*.” When this varnish coat is sufficiently dry—which should be in one day—the work is ready for glazing, which will be done with the same color as was used for putting in the grain in the first coat. Rub in the work panel by panel, with thin glazing color and stipple with the blender, softening the grain as may seem necessary.

The glazing coat in Mahogany graining seems more indispensable than in imitating the other woods, for the reason that Mahogany has more depth and transparency.

The finishing varnish coat, should be what the trade denominates as “hard drying coach body,” and should be flowed on with a thick badger hair varnish-brush, leaving as much varnish on the surface as will remain there without running.

## CHAPTER XIV.

## ROSEWOOD GRAINING.

THIS costly and beautiful wood yet holds its place in the fashionable world, and the arbitrary dictates of that capricious, yet almost unquestioned power, commands that certain articles of furniture for certain times and places, shall be shaped in this beautiful and costly wood.

Painted imitations of ROSEWOOD are not as a rule satisfactory or desirable, mainly from the fact that such articles as would be painted in imitation of Rosewood, are generally not fabricated out of the natural wood. Rosewood doors are not uncommon, 'tis true ; but their surroundings are usually such as to put grained work entirely out of the question.

The proper ground for Rosewood is Crimson Vermilion : not the so-called American Vermilion, but the true quick-silver product. The surface should be very smooth, and previous to putting in the grain, there should be a glazing of English Crimson Lake applied to the ground. This brings the surface to a proper condition for receiving the grain. This will be done with Black, but not Lamp Black. The grey tone of the common carbon, which comes from the destructive distillation of fatty substances, will not give what is required for the work in question.

The Black required for this work is to common Lamp Black, what the latter named article is to Lead Color.

There is a Black, used by coach makers, which comes from the carbonizing of pure Ivory. This is the only Black which has no rival but that darkness which has never known a ray of light. It may be obtained by the grainer—not at the ordinary places where ground paints are sold—but at some dealer who trades in coach makers' goods. It will be found ground in quick-drying vehicles, and for the requirements of the grainer, must be reduced with raw linseed oil. This Black is the proper material for putting in the grain of an imitation of Rosewood. This pencilling coat will be blended as fast as put in with the badger, and when thoroughly dry, the whole surface will be glazed with a very thin coat of the same Black as was used for the veined work. The glazing coat of Black—the Black being a body color—will, of course, be very thin, and the glazing process will be precisely the same as recommended for Black Walnut and Oak.

Rose Pink is sometimes used in place of Lake for the first glazing coat; but as this is one of the most fugitive of all colors, its use is not advised, especially for out-door work.

Rosewood imitations are not common, the wood itself being now mostly used for such articles of furniture as are not suitable for imitating with painted work. The example given on page 87, is a specimen of very dark, rich wood.



Rosewood.





## CHAPTER XV.

## SATIN-WOOD.

THIS is an East Indian wood of fine grain, and takes on a high polish.

It is displayed mostly in panel-work, and is imitated on a ground of the same tint as that used for Bird's-eye Maple. The graining color is the same also, as that used in graining the last named wood, viz: Raw Italian Sienna with a very small quantity of Burnt Sienna and Vandyke Brown. The difference in the painted imitations of these woods, is simply in the manner of putting in the grain.

The Graining is done wholly in Distemper, and the lights as shown in example on page 90, are taken out with the Cutter as shown on page 22, and the directions as to putting in the top grain, given in the Chapter on Mahogany Graining, are entirely applicable to the work in question.

It may occur to the reader, that these examples might and should have shown much finer work than they exhibit. It must, however, be remembered that our object is not to exhibit pictures of natural woods for expert grainers to copy, but to show actual grained work such as the learner is expected to reproduce with more or less exactness in painted imitations. These examples are copies of work actually done in the colors, and with the tools and by the processes we have attempted to describe and elucidate.

There is very little demand for Satin-wood in this country,

either in the natural wood, or in painted imitations of the same.

While it is important to cultivate a bold, free hand in graining, it must not be forgotten that a close imitation of natural wood is the result of careful manipulation, a practiced eye, and good taste. No man can perform a good job, in imitating colored and fancy woods, with a whitewash brush dipped in color, and get over a half acre of surface in eight hours. A grained door may be a "*thing of beauty*," as certainly as is the finest work of art which adorns the walls of a picture gallery. The itinerant picture vendor gladly accepts a few dollars for his pair of thirty by forty inch elegant landscapes, in broad Dutch-gilt frames. This sum, multiplied by hundreds, is freely paid for the work of some famous artist, the whole surface of which might almost be covered with a man's two hands. A door side may be grained for a quarter of a dollar, or twenty-five dollars may be expended, in labor alone, on the same surface. In either case the purchaser is supposed to receive no more than an equivalent for his money. In graining, the most skillful workman can perform easily and rapidly, the cheapest and plainest kind of work required; and it is a matter of necessity that the professed grainer shall be able to adapt his hand to any style of work which may be required.



Satin Wood. Distemper.



## CHAPTER XVI.

## BLACK WALNUT IN DISTEMPER.

THIS mode of graining BLACK WALNUT is recommended when a large surface is to be painted quickly and cheaply, and with little regard to the closeness of imitation. It is accomplished in various ways, and by various means, some of which—those deemed most useful—will be hereafter described.

First, the ground—similar in tone and character to that used in Oil Graining, Chapter VIII.—will be stippled on a coat of water color, made of Burnt Sienna and Vandyke Brown; but the coat and color both must be lighter than that recommended in oil graining. Upon this stippled coat when dry, may be put in the veins and lines with a sable pencil or with the top-grainer, as described in Oil Black Walnut Graining. This, of course, requires no time before the varnish coat, which must be—supposing the intention be to glaze over the varnish—quite thin. When dry the glazing coat of water color must be applied in precisely the same manner as shown on page 59, under the head of Black Walnut Graining in Oil.

It is common in work which does not present any extended surfaces, such as panels or rails—work which consists in mouldings and narrow flat pieces, as door and window frames, and cornices—to give first a stippled coat of oil color, and when dry, to put on over this a coat of Distemper Color and



grain with the blender, drawing the same more or less in right lines lengthwise of the work, and softening, as may suit the taste or fancy. This mode is recommended when the surfaces do not afford any chance for a display of artistic labor, or skill.

When a large extended surface of *new* wood is to be painted in imitation of Black Walnut, and the result is to be accomplished with the least expenditure of time and material, we recommend the following course of procedure. First give the work a coat of glue size, having a small quantity of whiting mixed with it. On this when dry, a coat of ground color made with pure White Lead, colored with Golden Ochre and a little Ivory Black, to produce a warm drab; thin almost entirely with boiled oil, and when thoroughly dry, apply with a largest size paint-brush, or an eight-inch kalsomine brush, a coat of Distemper Graining Color, mixed as follows: Vandyke Brown and Burnt Umber ground in water, added to an equal quantity of smooth flour paste. Thin this with water to a proper consistency and apply as before said. For the graining, use a handled duster, such as is common for removing the dust from a painted floor by means of a dust pan. Put the color on a large surface at a time, as it will not dry rapidly, and go over it straight or diagonally with the bristles composing the duster, and stipple with the same. The varnish coat over this needs be heavy, and of elastic material, to insure durability. This style of painting results in a clean respectable looking job, durable if properly done, and quite as cheap as ordinary two-coat work of plain painting.

## CHAPTER XVII.

## LIGHT OAK GRAINING IN DISTEMPER.

ORDINARILY there are no conditions or requirements where the painter or grainer is called to depart from the now almost universally adopted custom of graining oak in oil colors; but there may be occasions where a job of Oak Graining must be done in Distemper; consequently, every grainer should acquire a knowledge of the process. It is recommended only on the score of economy and saving of time in the operation.

A description of the process, as now in actual operation in one of the large buildings used, by the writer, as a manufactory, will, perhaps, best elucidate to the average comprehension, the mode of proceeding to accomplish the best results with the least expenditure of means.

First in order, the new wood receives a coat of glue size mixed with common whiting. This is followed by the coat of ground color—a light buff, similar to that on page 39, which is made of *pure* Lead and Golden Ochre, thinned with clear boiled oil. This oil coat, which bears out about as much as an ordinary second coat, is allowed to stand two days, when a rubbing of sand-paper brings it into condition for the Distemper Graining Color. For this, take of Raw Sienna, Burnt Sienna, and Vandyke Brown ground in water, whatever may be required to do the work; mix to suit the taste, as to

tone of color, and add to the mixture an equal quantity of smooth flour paste; thin with water to a proper consistency for application, and apply with a largest size paint brush; stipple with a whitewash brush, and comb as in oil graining. To give variety, some of the work will be combed, and some portion will be left as stippled by the whitewash brush. In case it may be deemed desirable to give a still greater variety to the work, a glazing coat of oil graining color may be given to every other board forming a wall, or bulk-head, or ceiling, and to a rail or stile of a door. When dry this work should receive a heavy flowing coat of elastic varnish. This style of painting costs but little, if any more, than ordinary plain painting, while it is much more durable and pleasing to the eye—that is, the general appearance is altogether preferable to plain colors.

## CHAPTER XVIII.

## VARNISHING.

THE shabbiest economy ever practiced in painting, is the use of cheap varnish in finishing any job where a coat of varnish is required.

Closing the seams of a costly garment with unsound thread, or covering an expensive house with a paper roof, would hardly evince less discretion in the way of true economy.

Work that is worth varnishing at all, is worth a good coat of that article. It will look better, wash better, and last longer, whether it be inside or outside work. A coat of cheap varnish—or a dear varnish, if it be not suited to this particular work—may, in a short time, spoil the best possible job of graining, and leave the surface in such a condition that all the labor expended will be worse than thrown away. *Quick drying, hard varnish, such as is used on furniture, is not suited to varnishing painted surfaces, especially if the work be exposed to the weather.*

It seems almost beyond belief, that a house-holder should secure, at whatever cost of trouble and money, the services of a first-rate artist to do a particular job of graining, and evince no anxiety as to the character of the varnish which is put upon the painted surface to protect and preserve it. The difference in cost between the best varnish and the worst, for a job of grained work, is but a trifle. The owner would pay

not less than three dollars a gallon for the poorest varnish—that most unfit for the purpose—while the best ought not cost more than six dollars a gallon. The difference in first cost between the best and the worst varnish, for coating both sides of a large door, would not be more than thirty or forty cents, while the one will wear ten times longer than the other, and give a much better finish. Many house painters are at fault in this matter, and practice a left-handed economy in the purchase of varnish.

What would be thought of a carriage painter who would expend fifty days' labor, and the requisite material in painting a coach, and finish the same with a coat of doubtful varnish, on the pretense of economy?

It must be remembered, that the durability of a job of grained work depends wholly on the varnishing. There is no good reason why grained doors should not last without repainting as long as an oil painting or other work of art, and they may be made as beautiful and attractive as the pictures which adorn the walls. It is quite within the power of a good workman to so finish a grained door, that it shall remain in perfect preservation for twenty years, or more. To effect this, requires, of course, the best talent, knowledge, skill, and a practiced hand; but it is within reach of every good workman. No good job of grained work, or any other work, in fact, should be looked upon as finished after one coat of varnish. Two coats, at least, should be put on—the first being what is known in coach painting as “quick leveling or rubbing varnish,” and the last, or finishing coat, should be hard-drying coach-body varnish. The first coat should, after standing long enough to become sufficiently hard, be rubbed with powdered pumice-stone, and the finishing coat should be flowed on with a flat, thick badger, or fitch flowing brush. As much varnish should be applied as will remain on the work without running. This operation requires skill and practice,

with an excellent judgment. No novice should attempt it. To show how difficult it is, the following extract from the "Coach Painters' Companion" is presented, and as the operation in question is similar to coach work, what is said has equal significance in this connection :

"Leaving this to harden, return to the body, which was left with one coat of varnish, and it will be found hard enough for first rubbing. Provided with a piece of cloth or felt and finely pulverized pumice-stone, a water-tool, and plenty of clean cold water, proceed to cut down the varnish\* as closely as possible, being careful not to go through to the color, and not to allow the pumice-stone to dry on the varnish; use the water-tool freely in all the corners and around the mouldings. This operation will be repeated through three successive coats of varnish, and the body is ready for the trimming shop. The carriage part must now be subjected to the same rubbing process as has been applied to the body. This work must not be trusted to unskillful hands. An expert only can do it to perfection. If performed by inexperienced hands, the result will be an untimely striping of all the sharp angles, and the prospect of a well-finished job materially impaired."

It will be remembered, that we are not now treating the question of common grained work, done under the whip and spur, of insufficient compensation, but of the best results that are possible, with imitations of colored or fancy woods.

Nothing is spared in coach painting, which can or may in any degree conduce to the durability of the work, not incompatible with beauty of finish; and the coach painter is supposed to have reached the maximum of these two most desirable qualities in combination. So, his example and processes are worthy of imitation, so far as they may be applicable to the work of house painting. Through a partial adoption of the modes and processes common in coach



painting, the painted surfaces inside our domiciles, may be rendered as much more beautiful and durable than they now are, as coach work is more beautiful than house painting. The assertion may seem startling to the average house painter's intelligence, but it is a fact nevertheless, that not one house painter in a hundred, has any knowledge of the proper use and application of varnish. In proof of this, we would state that a most common practice among them is, when varnish does not work easily in the brush, to thin it with turpentine, as they would thin a pot of paint.

Now there is no proposition more truthful than this : when varnish is too thick to spread under a brush, it is not fit to work, and cannot be made so, by the admixture of turpentine.

Varnish should not, and must not be rubbed out under the brush, as paint is rubbed out. The two processes are entirely different. In varnishing, the object is to put as much on the work as will stay there. The more varnish there is on the surface, supposing it be smooth and free from *runs*, the better. The object should be, not how little can the surface be coated with! but how much can be put upon it and made to stay there.

House painters should learn the art of varnishing from coach painters.

In concluding this Chapter, the writer would say, use for good work the best varnish you can get, and as much of it as will remain on the work without running.

## CHAPTER XIX.

## GENERAL REMARKS.

THERE is much that might be said in a general way on the subject of Graining, which cannot find room in a work of this scope and extent. The aim has been to describe the processes with as much detail and particularity as, in the opinion of the writer, would serve to elucidate the subject, and not befog the learner with a confusing multiplicity of directions. The difficulty of teaching any art or science, however simple, without the use of the technical vocabulary belonging thereto, cannot be appreciated by one who has not made the attempt. To teach by means of written words, a process when both teacher and learner are familiar with the technical terms naturally and properly belonging to such process, is comparatively easy : but to make clear to the comprehension of the novice, simply through such medium, a process—which depends for its successful execution almost entirely upon the eye—and at the same time so to phrase it as not to make it seem childish to the initiated, is a task which one comprehending these difficulties would be slow to undertake.

With an apology for the repetition we would again call attention to the fact, that the object has been so to present this matter, that one, unacquainted even with the simple names of the tools and materials usually employed, would be enabled to start from the right point and proceed in

the proper direction. The measure of success which will wait upon the effort, can be known only to those who seek instruction in these pages.

The reader will hardly come to the conclusion that all grained work, or even a majority of it, is wrought out through all the various processes heretofore described.

A very large proportion of what is called Graining, is finished with one coat of color to the ground work and one coat of varnish. Indeed, two varnish coats are the exception rather than the rule. Much of the Black Walnut Oil Graining is done without the stippled coat of Distemper Color, and varnished without glazing: but one must not expect to obtain the best results through so simple a process. What is worth having is worth working for; and this will be found true in Graining, as in any of the higher branches, of the Art of Painting.

The interior wood-work in mills, factories, and places of like nature, is commonly painted in imitation of some of the lighter hard woods, not so much on the score of appearance as for cleanliness and economy. A varnished surface is much more easily kept clean than a surface of ordinary paint; but varnished *plain colors* do not look well. Under such circumstances, no attempt is made at putting in fine work, the object being to turn off the job as quickly as possible, with a view to neatness and general uniformity.

City Grainers, those who call themselves "Grainers to the Trade," do not usually in large jobs, "rub in" the work themselves, but employ one or more boys, who soon become expert in the preliminary process of rubbing in, combing, &c., and who are from the nature of their occupation, in the very best possible school for acquiring a thorough knowledge of the Art.

The importance of a smooth, hard surface to grain upon cannot be over-estimated. The best workman in the world

cannot do good work on a rough, uneven surface, for the reason that the rough places will retain an undue proportion of color, and will not part with it when the attempt is made to wipe out the lights. A well sand-papered surface and finely ground colors are indispensable to good, clean work.

There are some otherwise very good Grainers, who have a slovenly habit of not cleaning up the ends and corners. They remind us of men who wear good clothes, but who neglect to brush their hats and black their shoes. Care should be taken to carry the work closely and cleanly down in door frames and base boards, to the contact line with their resting places: as also to cut closely and wipe cleanly along the joints and lines in panelled work. New Pine wood-work, which is to be finished in imitation of any of the hard woods, should always be first coated with a color darker than the intended finish, and the first coat should be well sand-papered. The succeeding coats should be as dark as possible, with a view, of course, to the proper ground-tint for whatever kind of wood it is proposed to imitate. By such a course of procedure, the liability of the finished surface to accidental injury is very much lessened. As the varnish becomes in time brittle, it will, under the accidental blows which it is in the nature of things subjected to, be liable to chip off, and bringing the graining color and ground color with it, reveal the underneath coats. If the color underneath be dark, the general appearance of the work is little defaced, compared with what it would be supposing the priming coats were white.

The writer has been at loss to comprehend why men, as a rule, ordinarily practice a niggardly economy in respect to the painting of their houses, while exhibiting a profuse liberality in most other house decorations and embellishments, such as carpets, hangings, furniture, &c.

An owner having decided upon the repainting of his

domicile, seems naturally impressed with the idea that the proper thing to do, is to call upon all the "Trade," far and near, with the request that they come over and view his premises, preparatory to furnishing estimates as to how cheaply the work may be done, it being understood that the painter who makes the lowest figures will "get the job." Suppose the house after repainting, shall require new furniture, carpets, hangings, &c. Would any but a lunatic think, under the circumstances, of going to all the upholsterers in New York to obtain estimates of cost, with a view of letting out the work to the concern which would promise to do it for the least sum of money? There is as much latitude in the way of quality and kind, in house painting—graining particularly—as in furniture and upholstery. A Grainer may paint a side of a door with an expenditure of ten cents worth of labor, or he may bestow ten dollars' worth of labor on the same surface: and he may finish it with varnish that costs him one dollar a gallon, or with varnish which costs six dollars per gallon. In view of these facts, it seems a little unreasonable that a proprietor, having chosen the cheapest thing offered, should find fault because the grained work is spoiled by the cracking of the varnish, and that the blinds fade almost before the painter turns his back on his completed job.

No person, even in having his house painted, should expect to receive for his money more than its worth: and *cheap things* are as a rule, the dearest in the end. That this is especially true of paints and painting, the writer knows from the closest observation and an every-day experience of nearly forty years.

The reader is earnestly requested not to lose sight of the important fact that these words are directed, not to the experienced and practiced workman, but to the learner—the beginner. Not to him who can teach, but to him who is



desirous of receiving instructions, and the writer's task has not been a thankful one, because of the fact of how little can be taught by printed instructions, in an operation which depends for its successful execution almost entirely upon the perceptive faculties. True, the hand must be educated, and the intellectual faculties must possess a knowledge of the requisite means and materials; but the perceptive faculties alone must be consulted as to the success or failure of the work. The eye only can tell whether or not the work is a creditable imitation of the wood which the workman has attempted to copy. Once more we would impress upon the mind of the learner the importance and even necessity of attempting this work only with good and proper materials. As before said the first great difficulty in the way of the painter, who would become a Grainer, has been obviated by means of ready-made Graining Colors. These are now obtainable almost everywhere, and when not at hand or in the immediate neighborhood, may be ordered from the manufacturer, at the additional cost only of express charges. The cost of material for Graining is but a trifle, as a pound of the best and finest color in market may be purchased at retail for about twenty-five cents, and this quantity would be sufficient to cover from thirty to forty doors. It will be safe to assume that the Graining Color for one side of a door will cost not more than a cent. The best color will prove the cheapest, not only because of the greater surface it will spread over, but because the tone of color will best match the wood which it is intended to imitate. Cheap Graining Colors, like all cheap adulterated paints, are simply worthless.

The tint of the ground work is important, but relatively so from the fact that the work may be made lighter or darker by the application of less or more of the Graining Color. Nevertheless it is better and will cost less in time and trouble, to have the ground right to start with; and we have given the



proper materials for making the best average ground for the various woods. Referring again to the ground work, let us say that the surface should not be flat, but should present what is known among painters as an egg-shell gloss. That is, just so much oil should be used as will give this gloss and no more. If more than the necessary quantity of oil be used, the paint will not rub smoothly, and a smooth, hard, even surface is indispensable to a good job of Graining, particularly if the lights be taken out with the horn tool heretofore described. Every person who has studiously observed natural woods, needs not be told that no two widths in a wainscoting of narrow oak boards are precisely alike. They differ not only in grain and figure, but in tone of color, notwithstanding the general uniformity. Some of the boards will show a tone of color in which yellow is decidedly prominent. Other widths will show a brown as of umber in the plain portion. The grain also presents a variety of colors. Now as all these variations are to be shown in the painted imitations upon a uniform ground, it follows that the tone of this ground must be yellow enough to display the yellowest samples which the natural wood presents. The browner tones can be readily produced by the application of a thicker coat of the Graining Color, whereby the yellow ground work may be concealed. No two adjoining boards in a wainscot should be just alike, both in grain and shade, while there should be no violent contrasts. Of the two evils, the least is a dead level of uniformity. The first is only monotonous and unattractive, while the other is painfully suggestive of a failure, to perform a task which the skill of the workman was not equal to. Grained doors, particularly of Light Oak, should present corresponding panels similarly grained, as if sawed from the same log, supposing them to be natural wood. The work on a panel should be put in with reference to its corresponding companion, and not with its upper or lower

one, as the case may be. That is: the two panels side by side, should be grained with special reference to each other, and should be very similar in both color and grain. There must also be a general likeness in all the panels and the same character of work, and the same tone of color should be presented on all. The rails and stiles of the door will give sufficient opportunity for a display of the various kinds of grain and tones of color. As a rule, when the panels of a door are grained moderately plain, say with straight combing; and dapples as in sample on page 30, a greater show of work is made on the rails and stiles, the middle rail and stiles generally being selected for the most elaborate figuring, the top and bottom rails being generally plain and lighter than the outer stiles, which are usually heavy and similar in appearance. Inconsiderate persons may rashly condemn this methodical arrangement as unnatural; but every Grainer knows how indispensable it is to ensure a workmanlike job. With the greatest variety there must be a certain uniformity. No first-class joiner or cabinet-maker would throw together the different pieces which go to make up a door or a piece of cabinet work, without regard to selection. Such carelessness would result in violent contrasts and disagreeable incongruities. The advantage which the imitator has over the worker in natural woods is this: while the worker in the real, is restricted to such varieties as his stock presents, the Grainer may give a "counterfeit presentment" of such selections as best comport and harmonize with the surroundings; and moreover, a piece of grained wood in the highest style of the art is more beautiful, and frequently more costly, than the same work would be if made of the natural wood.

The aim of the writer—in giving suggestions as to the best mode of producing the proper tints and tones for ground work for the various woods—has been to simplify the thing as much as possible. To make plain, not to darken and con-

fuse—the object being to save the workman all unnecessary trouble and expense. The best and cheapest and most convenient simple material, for making grounds for Light Oak, Maple, Ash, and Chestnut, is Pure Raw Italian Sienna, tinted with Pure White Lead, not the so-called Sienna which is sold by most paint dealers under that name, but the genuine article, which can be, and should be obtained even at some cost and trouble, the said color being one of the most useful and indispensable articles in the paint-shop. For Maple ground, of course the smallest quantity is required, it being necessary only to change the white to the faintest suggestion of straw color. For Ash, the ground should be but little darker. For Light Oak more of the Sienna will be required, while for Chestnut a decidedly yellowish tone is wanted. Care must be taken not to make the grounds too dark. Rather in the other extreme, for the reason, that there is a remedy for a too light ground, in the application of a greater quantity of Graining Color, as also in the glazing coat : while a ground too dark, cannot be made lighter. For Dark Oak, Burnt Italian Sienna with white will produce a far better ground than any other *single* color. The same caution must be observed, however, in obtaining this color as was recommended in the case of the Raw Italian Sienna. The domestic so-called Siennas will not prove substitutes for the genuine Italian pigments.

The ground for Black Walnut may be the same as for Light Oak with the addition of a little Burnt Sienna and Black. No two professed Grainers perhaps, will agree as to the exact tint of color for ground work, each one having some predilection for a particular tone. These instructions being offered, not to the expert, but to the uninitiated, we do not propose to run counter to any man's prejudices, our object being as aforesaid, to simplify the matter to the last possible degree.

And now having written all that seems important to the learner, and everything, which in our view, can tend to make plain to the novice, the art of imitating woods with colored pigments, with an apology for any shortcomings, and a hope that no one will fail to find something instructive in these pages, we bid you, readers, one and all, a hearty farewell.



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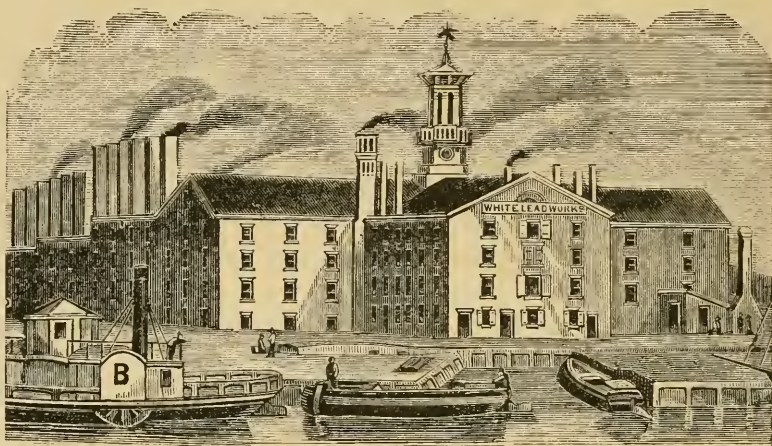
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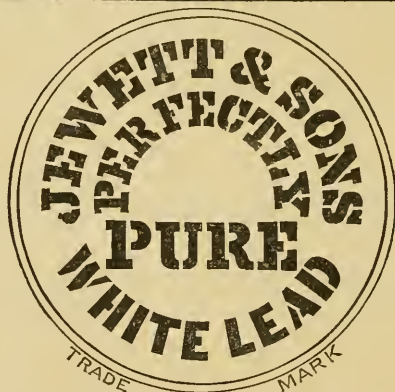
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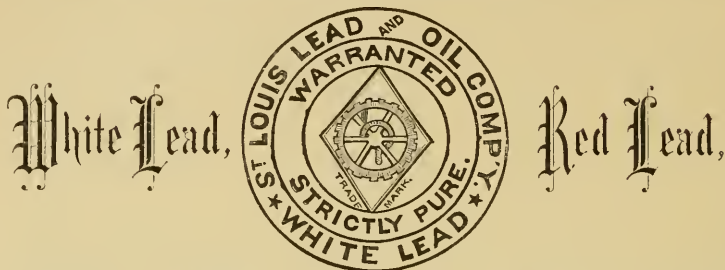
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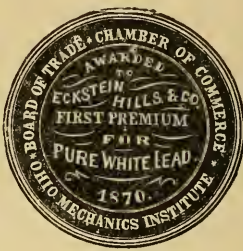
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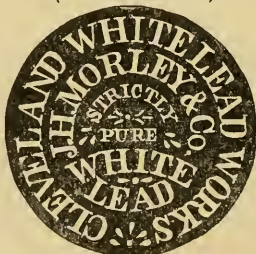
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We have now ready for the trade a line of Graining Colors, which are in all respects superior to anything ever before offered. These are ground finer than Tube Colors; and, being compounded of the best materials, and under the most competent handling, present the Grainer with a mixture ready for thinning and putting on, altogether better than any color which he can make with such materials as he may have at hand. The best jobs of Graining ever done in the City of New York have been done with these Colors. The materials being ground together, give more transparency and a better tone than it is possible to produce by mixing together Sienna, Umber and Vandyke Brown, as is the custom of those who make a specialty of Graining. All the Fancy Woods in common use can be better imitated with our colors than with any mixture which the Grainer can make with the ordinary colors sold in the shops. We have also Distemper Colors, Ground in Water, for Glazing, and for Distemper Graining, viz: Raw and Burnt Umber, Raw and Burnt Sienna, Vandyke Brown and Ivory Black. These are of superior fineness and quality, and will be found, in practice, much more economical than colors ground by hand. They are put up in one pound glass bottles, and sold at a uniform price of 20 cents per pound.

The illustrations in the "American Grainers' Hand-book" we refer to as specimens of Grained Work done with our Ready-made Graining Colors.

These Colors are put up in our patent thin top cans, from 1 lb. to 5 lbs., and upwards. Price per lb., 25 cents.

**JOHN W. MASURY & SON,***Specialty in Pure Paints.***III FULTON STREET, NEW YORK.**



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FOR

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### CAUTION TO CONSUMERS.

Consumers of our Superfine Colors, for their own protection, and as a matter of simple justice to the undersigned, are requested to observe particularly that every package bears *our full name and address*. In some instances a trial order of our goods has brought a second order which has been filled with some attempted imitation of our goods, which, being speedily condemned, has resulted in prejudice to us, the consumer not noticing the absence of our name on the package. Let it be borne in mind that these Colors are now *Standard Goods*; and when imitators offer you paints which they claim are equal to these, do not forget that at best they are, in the nature of things, untried and unreliable. To be tempted by so-called cheapness in *such* matters is not wise. To paint a job with our best Jet Black will cost at most only a shilling or two more than to use the commonest stuff in market; and this extra cost is only apparent, as the less quantity required and the saving in labor will more than compensate for the extra first cost.

**Superfine Colors in Oil.**—Do not forget that we furnish (except the Carmine Lakes and Sup. Jet Black) all our colors ground in oil, of the same quality, fineness and body as the Superfine Coach Painters' Colors. These are intended for use by House Painters and Grainers, and for Ornamental work. The price is generally about two-thirds that of the same colors ground in Japan or Gold Size. For example, the price of Burnt Umber ground in Japan is 35 cents per pound, whereas the color ground in oil, equally fine, for House Painters' use, would be only 25 cents, and so, as a rule, with all other colors used in House Painting.

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To remedy the evils which grow out of the common and extreme adulteration of paints, and to save the trouble and loss of time consequent upon the mixing of colors with white, the subscribers have adopted the plan of selling *Ready-made Colors*, all of which are tones and tints suitable for exterior, and many of them for interior, house painting. The list comprises twenty different tints and shades of color, which are produced by the use of such materials as experience has proved to be most suitable for such purpose, reference being had to economy, durability, ease of working, and purity of tone of color.

The advantages of our *Ready-made Colors*, known as "*Railroad Colors*," are many. They are more economical, because they are mixed in large quantities by steam-power, and as only the exact quantity of coloring matter required is added, there is no waste. The tones and tints are the purest possible, being produced by the use of the very best materials. They are always the same, being compounded by rule, and always in like proportions, and any additional required quantity of the same color may readily be obtained.

Samples are furnished, and the owner may select the exact tone or hue which may please his taste, before the work shall be commenced.

In estimating for quantity required, the following may be considered sufficiently correct for all practical purposes:

One hundred pounds of Railroad Color with the quantity of oil and turpentine required to thin the same, will give one coat to 750 square yards; two coats to about 450 square yards, and three coats to about 275 square yards of ordinary pine wood surface.

A Book, entitled "*Plain Talk with Practical Painters*," containing samples of the colors, will be sent free by mail on receipt of postage stamp.

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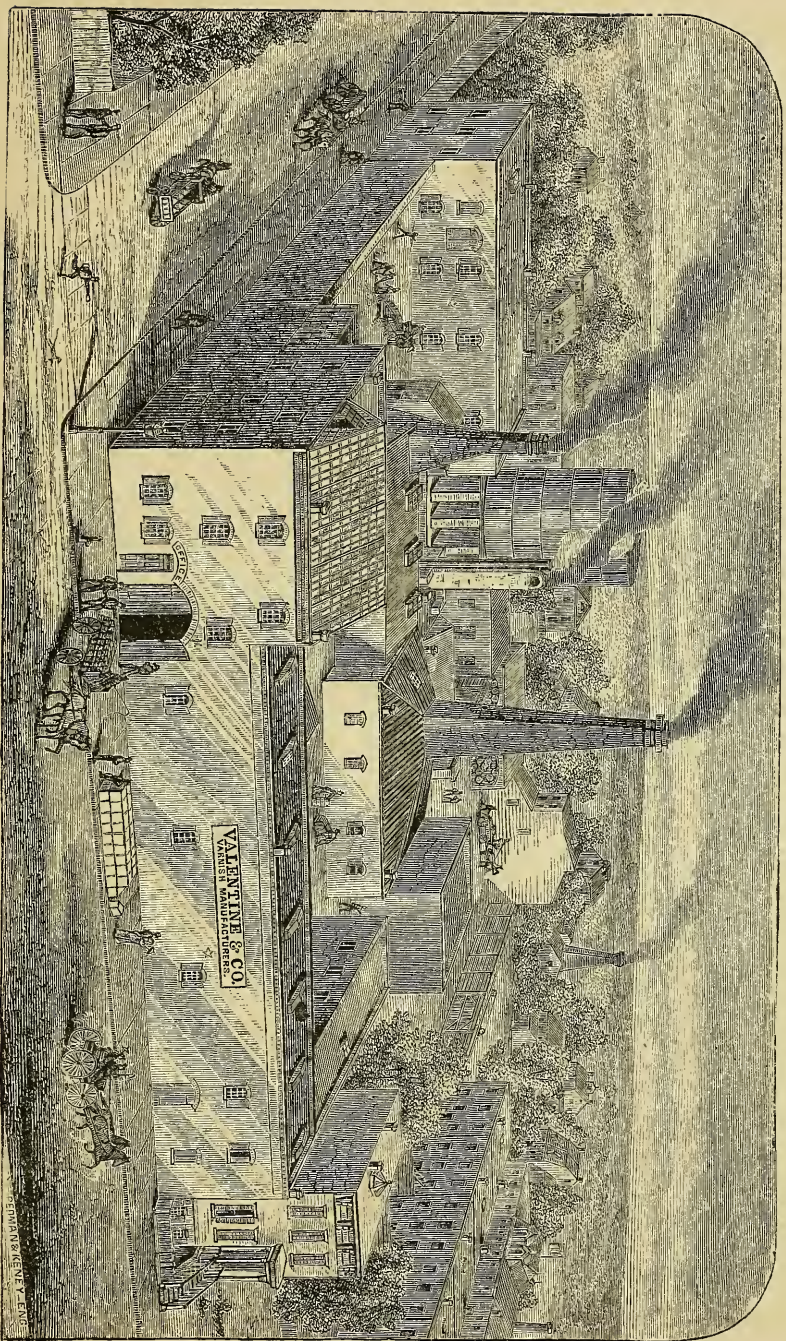
*Referring to **Chapter XVIII.** of this Book, we claim that our Varnishes fill all the requirements there enumerated.*

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